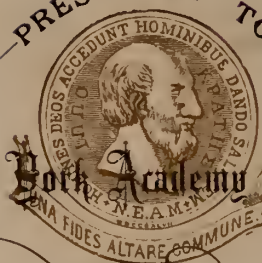


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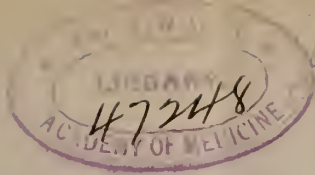
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*A Journal of Review, Reform and Progress in the
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VOL. I.

JANUARY, 1895.

NO. I.

(Original Papers.)

THE RECENT TYPHOID FEVER EPIDEMIC AT WINDSOR, VT.

Read at the Annual Meeting of the Vermont State Medical Society, October, 1894, by
J. D. BREWSTER, M. D., Windsor, Vt.

In compliance with the request of our secretary and others, I will endeavor to give a brief account of the epidemic of Typhoid fever which prevailed in Windsor last spring.

The first case was reported March 15th, and was in a family who resided at the extreme southern limit of the village, and at the time there could not be found any apparent cause for the disease.

No further case appeared until March 24th and 25th, at which time a large number of people were taken with high fever which soon showed itself to be unmistakably typhoid fever. These cases were among all classes of people, the rich and poor alike, but all within the village limits.

Observation soon showed the disease was confined entirely to families using the village water supply, those having wells being entirely exempt, except in cases of children who drank the water at school. This fact led immediately to the examination of the water system. Windsor was supplied by a series of springs situated about two miles or more from the centre of the village; these springs formed a small brook which ran along a valley for about a mile, passing six farms and dwelling houses and then emptying into a reservoir, from which iron pipes conveyed the water into the houses. Now about forty rods above the rise of the brook a farm house is situated, where it was ascertained a person had suffered the previous January from a feverish condition for

about four weeks ; it was supposed to be a non-infectious form of fever and was not reported to the local Board of Health and consequently no care was taken of the discharges of the patient and they were thrown into the vault ; to make matters worse, the sink drain was frozen at the time so all wash-water was thrown out upon the snow. During the very warm weather which we had the first week in March the snow melted and all this accumulation easily found its way into the brook and thence into the reservoir and our homes. This explanation was unanimously endorsed by the State Board, who made an official visit to the place soon after the outbreak. The local Board at once issued orders to have all water for cooking or drinking purposes boiled. At the same time the town provided a water cart to deliver water at the houses from an adjoining spring.

From March 24th to 30th about eighty cases were reported; from this date to April 27th the cases became less frequent, this time being probably the limit of the primary cases, the later ones being secondary and mostly occurred in families already suffering from the disease. Up to July 28th there were 130 cases, these occurring in 68 families ; the largest number afflicted in one family being five, the majority only one. The ages ranged from 10 months to 92 years, but the majority were under 20 years of age and a large per cent. were children. These withstood the disease to a remarkable degree, even with a protracted evening temperature of 104. The population of Windsor is 1300, so about 10 per cent. of the inhabitants were affected. We were fortunate in having only 17 deaths, or 13 per cent.

Six of the fatal cases had intestinal hemorrhage.

One died from perforation.

S. H—, 44 years old, died from complication of erysipelas.

Mr. V—, had temperature of 106° at death, and there was a rise of a degree a short time after.

M. K., a girl 14 years of age, was afflicted with infantile paralysis. She died in the 10th week, and at death had seven bed sores, those on hips leaving bone exposed, which was also carious.

Three died before end of second week, the average fatality about end of third or beginning of fifth week.

I will now give a brief history of a few of the cases which have recovered. Perhaps the most remarkable one is Mrs. C—, about thirty years old. She showed all the symptoms of typhoid fever, coated tongue, enlarged spleen, rose spots on abdomen, etc., but developed *no*

fever until 51st day, when evening temperature was 99° , ranging from this to $99\frac{5}{10}$ until 63d day, convalescence being very protracted after 13th week.

A. A——, aged 70, had typhoid symptoms, with evening temperature of 103° - 105° , with croupous pneumonia, rusty sputa, which continued to 12th day; from 14th to 21st no fever; from 22d to 32d average temperature 102° . Symptoms wholly abdominal, rose spots present, temperature normal to 40th day, from 40th to 54th day fever, highest temperature, 101° . Symptoms catarrhal pneumonia. Convalescence protracted.

C. A—— had relapse on 21st day with remarkable eruptions, some 30 or 40 large papules which soon became vesicula, and many of them pustular, while one was a true adenitis, which went on to suppuration, containing one-half dram of pus; this certainly was due to sepsis; this same case at beginning of convalescence had suppurative otitis media, and inflammation of mastoid, with one recurrence.

G. B—— had evening temperature of 105° first week, delirium beginning on fourth day, on 21st had subsultus and picking of clothing, and insomnia, continuing for a week, temperature ranging from 103° - 104° at night; convalescence after seventh week, but delirium continued two weeks longer.

Two cases had phlebitis of the leg. Ten cases had intestinal hemorrhage, Mrs. B—— was confined on fourth day, temperature 104° , the fever ran the usual course, recovery after fifth week.

Arthur K—— aged 13, after a mild form of the fever, appeared convalescent when malaria made its appearance, temperature, 105° ; after second day same symptoms recurred with usual course of malaria; large dose of quinine prevented a return; his history showed he had malaria eight years before.

The most prolonged case was that of Henry S——, who had a temperature for 102 days. This case had very severe hemorrhages on 49th day, was not removed from his bed for 116 days. After convalescence gained 23 pounds in twelve days.

I could give many more interesting cases, if time would allow.

From July 28th to August 30th, only two cases were reported, but during the month of September there has been twenty cases, thus making 150 cases in all, since the beginning of the epidemic; all of these later cases, with two exceptions, have been among the poorer classes living in tenement houses; two of these have died of perforation, both

having been in a state of collapse for 48 hours before death. Temperature, 93° - 97° and pulse 125—abdomen extremely distended, the accident in each case being sudden, when everything seemed progressing to a speedy convalescence. One fact is worthy of mention; in several cases there seemed to be secondary infection, appearing from four to six days after apparent convalescence, when there had been no change in diet or management of patient; they usually had a temperature for seven days, when true convalescence occurred.

Throughout the whole time the fever prevailed, all possible precaution was taken to disinfect discharges and the clothing of persons affected; the discharges were buried after disinfection with either corrosive sublimate or copper, and clothing put into boiling water. We all know how difficult it is to impress upon every one the importance of these precautions and doubtless among some of the more ignorant the instructions given were disregarded, thus causing the later outbreak of the disease among that class.

Windsor has for twelve years been remarkably free from the disease, not averaging more than 5 to 7 cases a year. I will here state that the Prison was entirely exempt, the water supply being from a different source.

The village voted to discontinue the old supply, except for motor purposes, and now the water comes from springs, which flow from the hill-side directly into a covered reservoir from which it is pumped into a stand pipe, also covered. The springs are distant from any dwellings and furnish no possible opportunity for pollution.

No water supply that is exposed to drainage from dwelling houses can be safe, for only the most untiring vigilance can prevent some accident which will involve its consumers in as sad an experience as Windsor, after using the water system for over fifty years. I can not close this paper without paying some tribute to the noble way in which our citizens responded to the needs arising from such a calamity. A mass meeting was held in one of the churches and a committee appointed to solicit money and clothing such as was needed for the sick, and to provide food for the needy ones. Many volunteered as watchers, and every day the village was canvassed to ascertain the needs of all. The sum of \$700 was raised to provide nurses for those who could not provide themselves. Twenty-eight nurses were employed, coming from Burlington, New York, Hartford, Ct., Worcester and Boston, Mass., thus aiding the physicians in no small degree. No disease needs

more careful watching than typhoid fever, and many owe their lives to the never-tiring care of the faithful nurse. Windsor may well be proud of her people as this test has proved them. May the time be far distant when any other town shall be called upon to prove herself her equal.

CAR SANITATION.

REPORT OF COMMITTEE AT THE ANNUAL MEETING OF
THE AMERICAN PUBLIC HEALTH ASSOCIATION AT
MONTREAL, 1894.

BY G. P. CONN, A. M., M. D., CONCORD, N. H., SECRETARY OF
NEW HAMPSHIRE MEDICAL SOCIETY.

A report upon this subject must include several topics; for in order to bring before the public a full realization of its importance, we must consider the construction, the heating, lighting and ventilation of coaches, as well as the methods of car cleaning now in use by the management of most roads.

This last is most essential, as it is the first principle of sanitation, without which nothing like a healthy standard can be assumed.

The problem of car sanitation is one of complex character and involves so many mechanical questions that one can hardly be expected to bring out the whole of the subject in a single paper. I have endeavored to get the opinions on this subject from other members of the committee, but have not succeeded in doing so, as for various reasons the different members have begged to be excused; therefore I have selected from the opinions of sanitarians and practical mechanics such quotations as seemed to have a concise, practical and unbiased bearing upon the conditions necessary to secure the sanitation of passenger coaches.

In the design of a car for the transportation of people it is important that it be constructed with a view to stability, safety and endurance. It must be constructed with a strength equal to the strain which is expected of it, in order that it may be safe to passenger and employe.

This is important, for without strength and capacity for endurance it would be a veritable trap to every one having anything to do with it. It is virtually and for the time being a house on wheels, into which the varying number of people are expected to make their homes for a longer or shorter period, according to the distance which they may be expected to travel. Therefore, like a house it should be constructed upon sanitary principles, in which ventilation, heating, and such conditions as will allow it to be kept clean are paramount factors in every case. Unless these sanitary principles can be carried out, and made permanent, then this house on wheels becomes unwholesome and unhealthy, and the conditions become favorable to disease or to disseminating it, should a contagious or infectious malady find a place within its walls. Theoretically speaking, a room or a car into which a large number of people are to assemble should have left out of its construction everything that is calculated to foster or develop disease germs; therefore, the plainer it can be made, the less upholstery, carpets and curtains that are placed within, would seem to be the best calculated for health. Practically, however, the public demands something more than plain walls and plain seats, and forget the conditions necessary for sanitation in their desire for luxury. This is an unfortunate circumstance, but it is necessary to deal with the problem as it exists. Probably cars could be constructed with much less expense on leaving out much of the draperies, etc., that is now considered necessary; but as the public demand the luxurious apartments which we find in all well-appointed cars to-day, we shall be obliged to consider the different classes of coaches just as they now exist on most of our long lines of travel.

Referring to ventilation, it is now twenty years since the State Board of Health of Massachusetts instituted an investigation into the condition of passenger coaches. They found that the atmosphere of the ordinary coach contained from one to six times as much carbonic acid gas as other public assembly rooms, such as churches, theaters and public halls. The same year, 1874, at the meeting of the Master Mechanics' Association, the master mechanic of the Boston & Albany and also of the Old Colony railroad made a report on that subject. It was taken up by the association, and considerable discussion followed. Some improvements came from this action, but since that period the progress of ventilation in cars has not been rapid, in fact it can scarcely be said that any improvements have been made. Recently, state legislation has placed the obligation upon the management to use steam heat;

therefore, the necessity of further improvements in ventilation has become apparent to every one. In ordinary weather during the winter the problem of how to heat the car with steam and not have it too warm is far more difficult in solution than it is to prevent it from becoming too cold. These difficulties are largely due to the fact that the men who have charge of this work are incompetent to carry out the designs of the inventor of steam heat. They have little or no conception of what constitutes good atmosphere in a coach, and they care but little about their work except that the time goes on and they draw their pay. They have no instructor beyond the mechanic who simply shows them how to turn valves which admit the heat and to shut it off, and the whole problem, as far as they are concerned, is how to keep heat enough in the car to keep it warm. The changing of the atmosphere of the car is of but little moment to them; they are constantly going in and out of the car at every station, and perhaps may be pardoned for not noticing the atmospheric condition that obtains throughout the train.

Another fact in car sanitation, and to me, perhaps, the principal one, as it involves every principle of sanitation, is absolute cleanliness. This may be impossible in coaches, yet a near approach to it need not be considered impracticable.

Cleanliness is the first principle in sanitation whether it be of cars or houses, and seems like a very simple matter. But when we consider that it involves in its principles cleanliness of atmosphere as well as material, then the problem becomes greater, for in keeping the atmosphere of the car clean, as well as its floor and ceilings, you have arrived at what may be called true sanitation. The problem of keeping a car clean is greatly enhanced by the fact that very many good people allow themselves and their children, when riding upon the trains, to become slovenly in their actions, throwing things upon the floor of the car that never would be permitted in an ordinary dwelling house. Why it is that people are so forgetful of good sense and good manners, when riding upon trains, is past comprehension; yet we see it every day, and the coaches become excessively filthy from that cause alone. It may not be easy to break up such habits, yet, if the trainmen formed habits of cleanliness in regard to the coaches which are under their care, it would have a very beneficial effect on the passengers. In the Pullman and Wagner coaches, where porters are employed to wait upon passengers and keep the car clean, when the occupants so far forget them-

selves as to cover the floor or carpet with the refuse of orange, banana or apples, nut shells, and other things which render a car unwholesome or unclean, and the porter goes around with his dust-pan and brush cleaning it up, it does not take a great many miles of travel for such people to see the error of their ways and to discontinue them. The same might be true of the ordinary coaches if the brakeman or person in charge should perform the same acts, for people naturally would become ashamed of throwing things upon the floor for another person to clean up in order to render the apartment comfortable.

Little need be said in regard to heating of cars, as that has become a question of legal importance. The accidents by fire became so numerous that the different state legislatures took it in hand, passed laws doing away with the ordinary stove, and substituting steam heat. Unfortunately there was no concert of action with different roads in the use of steam heat, as each road experimented for itself; the consequence being there are many different methods of transmitting steam through the cars. Which of these is the best I am not able to state, but it is to be hoped that some uniform method will be adopted by which all roads will be able to effect interchange of cars, and that the instructions which should be received upon that particular subject shall be so uniform that there will be no difficulty experienced in keeping cars properly warm and ventilated.

To digress a moment, I would add that it has been found necessary to open schools of instruction in the use of the air brake, and I am told that old and experienced trainmen after attending these schools have been surprised to find how little they knew of the practical application of what was supposed to be merely an automatic machine.

Now this instruction is secured by fitting up a car with all the mechanism of the automatic brake, and having a thorough mechanic for a teacher; and why not combine with that the teaching of car sanitation, to the extent that the trainmen may fully understand how to use such devices as are now found on most passenger coaches?

In regard to the different systems of ventilation, several experimentors and inventors have gotten up systems of their own, got them patented and endeavored to put them on the market. Some of them are very complex and all of them require some knowledge of the subject, else they cannot be made useful. All of them involve extra expense in the construction of a car.

The question of how to ventilate a car is one which the mechanic and sanitarian must bring out together. It seems as though it would be quite impossible to invent any system that will change the air of a car while in motion and at the same time be effective while it is standing still. With electrical power it may be possible to place fans in a car, the same as you do in a house, that will be effective when the car is standing still, but when the car is moving the pressure of the atmosphere upon the outside is so great that considerable change will take place inside the car. Then again this pressure of the atmosphere is so much different when the car is moving slowly than when it is if the car is moving rapidly that it brings up another point in the problem of ventilation to be solved by the practical mechanic.

Before the use of the power brake, the duties of the trainmen were almost constant and imperative, but with the advent of the automatic brake his duties were made much lighter and less exacting.

It is true that with the introduction of the various improvements that have been or may be instituted, a higher order of intelligence may be required than was necessary to assist in stopping or starting a train, yet that does not prevent the average trainman from doing good work, providing he has proper instruction.

The Railroad Car Journal publishes the report of the committee of the Master Carbuilders' Association, from which I quote at length :

"In all modern systems of ventilation, sanitary engineers endeavor to have a plenum instead of a vacuum, or, in other words, to have a slight excess pressure inside of the building instead of a slight vacuum. With a plenum there can never be any cold drafts or admission of dust, smoke or cinders, for the reason that the pressure would always be driving the air outward, through every crack and opening. With a vacuum the reverse is the case, and dust, smoke and cold air will find their way in at every crack. It is very desirable that the windows of passenger cars be so arranged that they can be locked fast in winter time, to prevent one obstinate passenger interfering with the comfort of the whole carload, but this can only be done when a sufficient supply of fresh air is constantly being furnished to the passenger, comfortably warmed. The opening of the doors at stations is also a great interference with a uniform system of ventilation. This cannot be avoided, but the evil effects of it can be largely overcome by building the cars with an inner swinging door. Most of the modern larger passenger cars having smoking rooms, double saloons and heating apartments,

can be easily fitted up with a swinging door at the end of the passage in between these compartments, which will act as a kind of air-lock and prevent a good deal of discomfort otherwise unavoidable. A convenient way of arranging the windows so as to avoid the drafts and interference to the comfort of the passengers in the winter time, would be to have the outer sash arranged, as is commonly the case now, with the inner sash arranged so that when lowered they will lock themselves tight and can only be released by a lever at the end of the car, attached to a locking bar running the full length of the car on either side. These windows could be kept raised in summer time, the outer sashes being so that the passengers can raise them or lower them as they please. In the winter time, when these sashes are lowered, no windows could be raised.

"To summarize, the ideal conditions would be as follows :

"1. The admission of thirty cubic feet per minute per passenger of fresh air, and the carrying off of an equal amount of foul air, summer or winter.

"2. The fresh air so admitted must not be moving at a speed of more than three or four miles per hour in winter time.

"3. Fresh air admitted must be of a temperature in winter time of about seventy degrees Fahr.

"4. Fresh air so admitted in winter time must have added to it a proper degree of moisture for the temperature at which it is admitted, according to the average humidity of the atmosphere, when at seventy degrees in the climate in which the cars are running.

"5. No system of winter ventilation can be more successful unless means for the fresh air supply are provided independently of and separately from the windows and doors, as well as the ventilators for carrying off the foul air.

"6. The fresh warm air should be distributed through as many openings and as low down as it can be conveniently arranged for, and the foul air should be carried off through as many small openings in the roof of the car as can conveniently be arranged for in winter.

"7. The ventilation should be entirely independent of the speed of the train and act as well whether the car is standing or running.

"8. The ventilation should be so arranged that there will be a plenum or slight excess of pressure inside the car, so that all drafts will be outward instead of inward, and smoke and dust thus excluded.

"9. It is most desirable that double windows should be used, and so arranged that they can be locked fast in winter time, but readily opened in summer time.

"10. It is most desirable that an inside swinging door be used, so as to form an air-lock or inside vestibule, to prevent the admission of cold air and dust every time the doors to the platforms are opened."

In arriving at these conclusions this committee had an investigation made under the supervision of an expert, and incorporated into their report something of his work, and the reasons for summarizing such ideal conditions as they have deemed necessary for perfect ventilation.

The committee add the following :

"It may be argued that there is no use for any such system of ventilation as this, that the present arrangements for the ventilation of passenger cars are good enough, and that nobody is any the worse for the present state of affairs. To show that this is an entirely wrong position to take, your committee had a number of tests made to show the degree of foulness of the air in sleeping cars, chair cars, and day coaches, which tests have been under the supervision of Mr. Wm. Forsyth of the C. B. & Q., through the kindness of Mr. Rhodes. Pure air contains from three to four parts in ten thousand of carbonic acid, and at seventy degrees Fahr. an average condition of moisture would be from four or five grains of water per cubic foot.

"Dr Agnus Smith made a series of careful experiments in lead-lined air-tight rooms for the purpose of seeing how long healthy people could exist in an atmosphere having an excess of carbonic acid and moisture. As the result of his experiments, it was shown that it was very unwholesome to breathe an atmosphere having more than seven parts in ten thousand of carbonic acid, and that an atmosphere containing ten parts in ten thousand could not be endured by delicate people for long without injury, and that as the presence of an excess of carbonic acid is a direct indication of the presence of micro-organisms, commonly called disease germs, the injurious effects are not merely limited to the poisonous influence of carbonic acid, but that the danger of taking organic diseases was very largely increased. It was further shown that the senses are a very unreliable guide in judging of the foulness of the atmosphere, and that people who remained in a room in which the atmosphere had become gradually fouled would hardly notice its foulness, whereas outsiders suddenly coming in would be almost suffocated.

"Micro-organisms, or disease germs, are not given off to any harmful extent in the exhalations of healthy human beings, but they are given off in large numbers in the breath and spittle and evaporation from the skin of unhealthy persons. Especially is this the case with people suffering from tuberculosis, whooping cough, fevers, and so on, and the disease germs grow and multiply very rapidly in a foul, moist atmosphere. To quote a prominent naval surgeon: 'The road is short, straight and sure from vomica and mucous patch to the receptive natus in another's body. Who that has ever had forced on him an aerial feast of cabbage, onions, garlic, alcohol, tobacco and gastric effluvia of an old debauch, can doubt that aqueous vapor can transport microscopic germs by the same route.'—A. L. Gilson, M. D., in an address before the Pan-American Medical Congress in Washington, D. C., 1892.

"Experiments made in Europe on animals which were inoculated with a preparation from the dust beaten out of the cushions of railroad cars in ordinary service, and which cars were not known to have carried sick people, showed that the most of the animals which were inoculated died of violent diseases. Few of them lived long enough to die of tuberculosis, none of them survived. As these micro-organisms are in the air and simply settle on the dust, all this goes to show how very necessary indeed it is to carry off the foul air, and that, to quote a southern physician, 'The movement of vast masses of people annually from one section of this broad country in search of those climatic influences modifying the course and progress of disease has become, from a sanitarian standpoint, a great unsolved problem; namely, that of accomplishing the proper ventilation of cars by the introduction of pure air, free from dust, cinders, smoke and so on, and at the same time the withdrawal of the impure air arising from the natural emanations of the body, as well as the more serious dangers accruing from chronic or contagious influences.'

"All these devices which depend upon the speed of the train for their action, and where the air intakes surround the stovepipe, every time the car stops the ventilating process ceases and may be reversed; at slow speed it will be almost inoperative.

"Great improvement could, however, be made in the condition of the air in our crowded passenger cars if the trainmen were compelled to pay proper attention to the ventilators; a regular set of instructions should be furnished them for their guidance, and division officers should

be instructed to pass through the train at every opportunity and report cases where the ventilators have been neglected and the air overheated or foul to the division superintendent for discipline. The men would then soon learn to attend to this part of their duty. Sleeping car companies should have a code of rules printed and posted in the cars, and their porters and conductors should be made to observe such rules. One specially important thing is not to open the ventilators on the windward side of the train, otherwise with drop sash or trailing sash ventilators down drafts and cross drafts are unavoidable."

The above extract from the report of the committee of the Master Car Builders' Association has much to commend itself to our notice, as it comes from the best and most advanced class of practical mechanics. As a rule such men are not visionary, but reason from cause and effect; therefore their opinions are entitled to our consideration. I understand the report was written by Master Mechanic Sanderson of the Norfolk and Western railroad of Virginia; yet when asked his personal opinion of its being practical to carry out such ideas, and use the average trainman to accomplish the work, remarks in rather a sarcastic manner: "I wonder what the A. R. U. or any other railroad organization would say if we required our immaculate brakeman to do the chores in the cars."—Mr. Sanderson, master mechanic of the N. & W. R. R., Roanoke, Virginia.

Another member of this committee, when asked if he believed it was possible to carry out such an ideal system as the report would allow the public to expect would be in use in a few years, says: "I would say in answer to your first question that I do not believe, as a railroad mechanic, that it will be possible to introduce and have accepted by railroad managers the ideal conditions in a passenger car as expressed in the paper that was read on this subject. I do believe that if our trainmen were educated to make better use of our present facilities there would be less complaint. They have been relieved from year to year of their former duties, until they feel that all they need to do is to wear a uniform."—Mr. West, master mechanic N. Y., O. & W. R. R., Middletown, N. Y.

Undoubtedly this is true, and we are all the more ready to believe its truth after having once asked one of these uniformed "Mikados" to ventilate the coach. That look of pity and condescension makes an impression never to be forgotten.

[*To be continued.*]

VACCINATION.

By C. S. CAVERLY, M. D., Rutland, Vt.

In these days of dazzling achievements in the line of bacterial research, by which the etiology and treatment of infectious disease is rapidly approaching scientific accuracy, we should not lose sight of that early triumph of medicine—founded though it was on empiricism—which has immortalized the name of Jenner. Much as we wonder at, and admire, the accurate work of the modern bacteriologist, and eager as we all are to take advantage of that work, we are still bound by the lessons of a century's experience not to allow vaccination against small pox to lapse into disuse. The prevention or restriction of tuberculosis, diphtheria, cholera, hydropobia, is of vast importance to mankind, but while fresh discoveries along these lines are of almost daily occurrence and of absorbing interest to the profession, we should not forget that small pox still exists and that its prevention still offers a large field for the practitioner and sanitarian.

Small pox has been allowed to gain considerable headway in this country recently, especially during the past year. New York, Chicago, and other large cities have proved fertile soil for the development and propagation of the germs of the disease, and from these centers nearly all the states of the country have been infected, including our own. There are now in this State according to reports to the Secretary of the State Board of Health *over twenty cases* of varioloid, a greater number than at any one time for many years.

The question of vaccination is then one in which all our people, and especially our physicians should take an active interest. The opposition to it is not always confined to the ignorant or fanatical and it becomes our duty to treat it respectfully however unreasonable it may be. That the operation of vaccination as sometimes practiced without regard to cleanliness or the source of the virus has in times past been the source of both local and constitutional disease is probably true, and such occasional cases have been utilized to good advantage by the anti-vaccinationist. It should be everywhere known that these dangers from vaccination—always infinitesimally small as compared with the benefits of the operation—are almost entirely eliminated by modern antiseptic precautions and care in the cultivation of the virus.

It is time that the profession as a body took very radical ground on this subject, for the situation seems to warrant it, and there is no doubt that we have the confidence of the people now in matters of this kind more completely than ever before. Vaccination and re-vaccination should be urged on all suitable occasions and the reasons therefor patiently explained if necessary.

If statistics can be depended on to prove anything they certainly prove beyond all question that vaccination does protect. Dr. Z. Taylor Emery, Health Commissioner of Brooklyn, in a circular issued last spring, cites these official

figures of the death rate per million of inhabitants in the following countries for the years 1887 and 1888:

	1887	1888
Austro-Hungary (Vaccination optional).....	583.7	540. ³
Russia (Vaccination optional).....	535.9	231.5
France (Vaccination optional).....	167.0	191.9
German Empire (Vaccination compulsory).....	1.	0.8
Denmark (Vaccination compulsory).....
Sweedeen and Norway (Vaccination compulsory).....

The most recent authorities give the mortality among the unvaccinated from the disease as at least 35 per cent. While among the vaccinated who still have good marks it is under 4 per cent.

Every student of history is familiar with the fearful ravages of this scourge prior to Jenner's time. Its fatal and disfiguring effects were the bane of the civilized world. It is a matter of history too, that the disease has been largely robbed of its terrors during the present century, and that most largely in those countries where vaccination has been most thoroughly practiced.

If it were a less important subject one should apologize for repeating these arguments to the medical profession, for we have all heard them repeatedly. But there is no doubt that we, as well as the public, need the stimulus of a threatened epidemic occasionally to keep a knowledge of these facts before our minds.

During years of immunity a crop of children is allowed to grow up unvaccinated, and old scars are allowed to fade out and become ineffective, until we are suddenly startled by the presence of the disease. Then there is a general vaccination, and the disease is speedily stamped out. It is now eleven years since we had our last object lesson in this disease, and during the interval it is safe to say that the number of vaccinations has been exceedingly small.

During the time of the very general outbreak of the disease throughout the country last spring, the State Board of Health issued a circular to all the Health Officers in the State, advising general vaccination. The recommendation of the Board was very generally followed at that time, and while it is not likely that the disease will make any headway in the State the present winter, yet its appearance at various places early in the winter calls for vigilance on the part of physicians generally and Health officers especially.

The present then is a good time for us to renew our acquaintance with vaccination, and to remind the public that we have an antidote to small pox quite as certain as those to diphtheria, tuberculosis, hydropobia, etc., and one that has stood the test of a century.

THE USE OF ANTITOXIN IN RHODE ISLAND.

With a view to introducing anti-diphtheretic toxine in Rhode Island, the State Board of Health is making preparation for the diagnosis of supposed cases of diphtheria. Dr. Swarts states that the Board proposes to examine throats for

physicians, and for this purpose materials are to be sent to the towns and cities in this State. This consists of a little box, in which are placed two glass tubes. One will contain sterilized blood serum for getting the Loeffler bacillus, while in the other will be a sterilized cotton swab on the end of a wire. These will be left at the various drug stores in the State where the sputum bottles are to be found, so that when a physician suspects a case of diphtheria he can procure the outfit handily, and have the case diagnosed very quickly by the Board of Health. The operation consists of taking the cotton swab and passing it down gently over the back of the throat where this membrane is. The secretion on the swab is then rubbed over the blood serum in the other tube, care being taken not to soil the swab or allow anything to get on to the blood serum in the operation. This is then sent to the Board of Health and placed in an incubator from twelve to twenty-four hours, by which time the Loeffler bacillus, with any other organism that may be produced, is formed into a film over the surface of the serum, which is examined microscopically by the usual methods, and the character of the organisms determined. After the examination the physician is at once notified, either by telephone or mail, special delivery, so that prompt action can be taken in case of diphtheria. In case the new remedy is obtainable it should be administered within three days after the disease has set in in order to be the most effective.

The State Board of Health has been giving considerable attention to the new cure for diphtheria of late, and the secretary, Dr. Swarts, visited Washington quite recently and was present at a lecture given by Dr. Kinyonn, who investigated the methods employed at the Pasteur Institute, Paris, in the preparation of the new cure. He is very much taken up with the new cure and considers it a very important thing in medicine. On the question of whether the State Board of Health should propagate the serum, however, he was not ready to say that it should at this time. The number of cases in this State have not been great, and in Providence, where the largest number occur, there were but forty-six deaths from diphtheria last year. He thought, however, that every State Board would ultimately produce its own serum. One thing necessary in the conduct of such business is a bacteriological laboratory, which should be fully equipped and owned by the State.

THE TUBERCULOSIS LAW IN MASSACHUSETTS.

Fully 200 members attended the adjourned meeting of the Worcester Milk Producers' Association, held in Worcester Monday. Warren C. Jewett, President of the Worcester Board of Aldermen, presided. Most of those present came as delegates, representing 57 granges and farmer's clubs and 15 towns in Worcester and the western counties.

Following are the most important sections of the resolutions adopted, concerning the tuberculosis law.

Resolved, That it is the unanimous opinion of the meeting that the present law, so far as it relates to tuberculosis as enforced and carried out by the State

Board of Cattle Commissioners, is radically wrong, unjust to the farmers and the farmers and owners of live stock, pernicious in its results, unconstitutional, and we believe applied in an unlawful manner.

Second—That the provision allowing as compensation to the owners of cattle which have been killed only one-half value is unjust, and should at once be amended so as to give the owners full compensation at a fair valuation of all animals killed by order of the State Board of Cattle Commissioners.

Third—That the method which has been adopted by the State Board of Cattle Commissioners as a test for discovering the disease of tuberculosis, viz., the use of tuberculin, is a grievance that should at once be relieved by legislation, inasmuch as the board acting under it have assumed to proceed in this manner whether the use is authorized by the act or not. We believe the use of tuberculin to be objectionable for the following reasons: Because it has not been demonstrated that it is a reliable test; because it is believed to render healthy cattle more susceptible to disease, and no test believed to endanger healthy animals should be generally introduced until it has been demonstrated beyond reasonable doubt, by experiment, that the test is reliable, even if its general use would then be warranted; because there is no such danger imminent from the disease as to warrant the use of this dangerous test, it being at least very doubtful if the tuberculosis in cattle, can be communicated to human beings.

It is interesting to note the opinion the farmers have in regard to the use of tuberculin as a diagnostic for tuberculosis.

VERMONT STATE MEDICAL SOCIETY.

The eighty-first annual meeting of the Vermont State Medical Society was held in the County Court House, Montpelier, on Thursday and Friday, October 11 and 12, 1894. The meeting, though not the largest, was probably the most interesting and enthusiastic in the history of the society.

Among the important topics considered, were Tuberculosis and Typhoid Fever, the President's address dealing with the first named subject, and a valuable paper by Prof. Frederic C. Shattuck of Boston, outlined the "Modern Treatment of Typhoid Fever." The recent epidemic of Typhoid Fever at Windsor, in this State, was made a matter of medical history, in a paper written by Dr. J. D. Brewster of that town.* Dr. John C. Irish of Lowell, Mass., presented an able paper on "The Surgical Treatment of Uterine Neoplasms," which brought out a long and interesting discussion.

The Annual Banquet was served at the Pavilion House, at 10 p. m., of the first day of the meeting, Dr. A. P. Grinnell of Burlington being Anniversary Chairman. About 150 were present, including members of the society, delegates and invited guests. The feature of the post-prandial exercises was the reading of an unpublished poem of the late Dr. Oliver Wendell Holmes, by Dr. Shattuck of Boston. Burlington was selected as the next place of meeting.

The following officers were elected:

President, J. H. Linsley, Burlington.

Vice-president, F. F. Chaffee, South Shaftsbury.

Secretary, D. C. Hawley, Burlington.

Treasurer, D. G. Kemp, Montpelier.

Auditor, Henry Janes, Waterbury.

Executive Committee, J. H. Linsley, D. C. Hawley, F. R. Stoddard.

License Censors, E. S. Albee, Bellows Falls; C. M. Ferrin, Essex Junction; and H. S. Brown, St. Johnsbury.

By the Secretary,

D. C. HAWLEY, M. D.

* See article on page 1.

A NEW SANITARIUM.

There has recently been established at Riverside, R. I., a Sanitarium under the direction of Dr. W. E. Hibbard.

This will fill a long felt want, for Rhode Island is somewhat behind her sister States in regard to well equipped Sanitariums. The location of the Sanitarium could not be better, for it is situated on the banks of the beautiful Narragansett Bay, but a short distance from Providence, yet far enough away to partake of a delightful quiet most refreshing to the invalid.

A special feature during the summer months will be the fine sea bathing, and in connection with the medicinal baths embodying the latest and most improved methods, and given by experienced attendants, the Sanitarium is certainly equal to any.

It is just the place for the tired business man to spend a few days and recruit his tired body.

Dr. Hibbard is a most competent and painstaking physician and with the co-operation of the profession he is sure to win a grand and permanent success for the Sanitarium. We wish him God speed.

The regular monthly meeting of the Burlington Clinical Society was held in its rooms in the Hayward block in this city on Friday evening. A paper on "Placenta Previa" was read by Dr. P. E. McSweeney. The officers of the society selected at the annual meeting in November are President, Dr. D. C. Hawley; Vice-President, F. R. Stoddard; Secretary and Treasurer, Dr. M. C. Twitchell.

This society was organized on Nov. 24, 1893, and includes in its membership nearly all of the regular physicians in Burlington and in Chittenden County, as well as a few outside of the county.

UNIVERSITY OF VERMONT MEDICAL DEPARTMENT.

The Forty-second Annual Course of Lectures will commence January 17, 1895.

Prof. C. Smith Boynton will deliver the opening address.

The number of matriculants is unusually large this year and the prospects are most bright for a successful term.

THE SUCCESSFUL TREATMENT OF RIGGS' DISEASE.

A short time ago a member of the Editor's family, a gentleman of forty-five years of age, was suffering with what was believed to be Riggs' Disease. There was no evidence of ulceration, no swelling and little soreness to speak of, simply a very evident loosening of the right incisors and canine in the lower jaw.

Several dentists examined the teeth, confirmed the diagnosis, but declared that there was not much to be done except to await developments.

A solution of Hydrozone was made in the proportion of one ounce of Hydrozone to four of distilled water, and used as a wash.

The treatment commenced at 6:30 p. m., and the mouth was washed very thoroughly three times before retiring, some of the solution being retained in the mouth each time for about a minute. The escape of gas showed plainly the presence of pus though in small quantity.

In the morning there was a marked change; the teeth were much firmer, what soreness had been present had entirely disappeared, and the test for pus gave no reaction whatever.

A weaker solution (about one to twelve) was used every four hours all day, and at night just twenty hours after commencing the use of the Hydrozone, the teeth were as firm as ever and have been ever since. But in order to prevent a recurrence of the trouble a weak solution of the Hydrozone (about one to twenty-four) is used every morning as a mouth wash.

From its great antiseptic qualities it is found to be an excellent wash for cleansing the mouth of every bad taste, and rendering it pure and clean.

BY THE EDITOR.

We are in receipt of Frederick Stearns & Co.'s "Daily Reminder," a very neat and useful memorandum for the physicians pocket.

The present year is the Fortieth Anniversary of this reliable firm who have won an enviable reputation in business circles for their honesty of purpose and deeds.

We thank them for their kind favor and wish them continued success and prosperity.

The Vermont Medical Monthly,

*A Journal of Review, Reform and Progress in the
Medical Sciences.*

H. EDWIN LEWIS, MANAGING EDITOR.

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EDITORIALS.

ADULTERATION AND SUBSTITUTION.

In the New England Monthly for November the editor takes occasion to treat at some length the subject of adulteration and substitution by druggists. While rather sweeping in some assertions, the article is certainly a timely one.

It is a lamentable fact that such a condition does exist among the druggists, and decisive steps should be taken immediately to check the ruthless substitution of one preparation for another, extenuating the act, by claiming it "is just as good, or better."

A physician prescribing a certain manufacturer's preparation, does so because he fully realizes the specific effects of that preparation and desires those results only. If something else is substituted, prepared differently and embodying the different ideas of another firm, different results may possibly appear. While they may be minor in degree, the principles are the same, and the physician finds conditions arising which

were not expected. Every physician must realize the perplexities liable to arise from such substitution. Adulteration needs no comment, for the facts are too obvious.

Now the Editor wishes to go on record as firmly believing that there are many druggists in Vermont and New England who do a legitimate business and merit the trust and confidence of physicians in every particular, but this does not alter the fact that there are many who do *not*.

And as the wanton acts of some make the whole liable, legislation should govern the entire field. Many States have Commissioners to examine the food supplies and the like. Now in the name of common sense, if the adulteration of provisions, etc., is criminal, is not the adulteration of medicinal preparations and drugs equally so?

To the innocent druggist who is endeavoring to practice a legitimate business a Board of Pharmaceutical Examiners would have no terror, but to the fraudulent pharmacist whose single aim is to derive a great profit from the ignorance of his customers, or their faith in him, such a board would certainly prove a restraining power and oftentimes a preventive.

Such a result is surely desired by physicians for the sake of their own reputations, and druggists have no right to complain at the decrease in their trade until they prove themselves worthy of the confidence of the medical profession.

The anxiety of the farmers throughout Vermont at the prevalence of Tuberculosis may be allayed to a considerable extent by the welcome news that Dr. F. A. Rich of the Experiment Station is conducting a series of experiments aiming towards the cure of this disease. His success in this line is greatly hoped for by all, for, as at present indicated, there are a large number of animals infected, and the necessity of killing them will deprive many a poor man of practically his only source of income.

Dr. Rich has made an enviable record and we wish him abundant success.

With this number commences the existence of the Vermont Medical Monthly.

The co-operation of the profession is desired by the editors in order to achieve a success that may be lasting and productive of much good to physicians in general.

While the Monthly is distinctly a Vermont institution, it will be a general New England publication, free from localism and any narrowness of opinion. A high standard will be attained if possible in every branch of the medical sciences and "progression" will be the watchword.

We appeal to all for assistance.

This may seem queer and rather of a strong request, but the aid we ask is your subscription. One dollar is a small sum, and can certainly be risked for one year's subscription without fear of serious consequences. We guarantee a fair return. Subscribers, whose name and address is printed on envelopes, can be assured of receiving the Monthly one year, by simply enclosing one dollar, and mailing to the editor.

Our policy will be liberal, though adhering strictly to the time honored principles of the regular profession.

May all stand by to aid the Monthly achieve a success worthy of the name it bears.

MEDICAL ABSTRACTS.

DEATH FROM BICYCLE RIDING.—Dr. M. L. Petit reports ("N. Y. Med. Jour.") three cases of sudden death due to bicycle riding in patients affected with heart disease. The first case had been that of a man, 60 years old, apparently healthy, and the second that of a man just recovered from typhoid fever. Dr. Petit was of opinion that old people, and those affected with cardiac troubles, should not indulge in bicycle-riding, as it might be attended with serious, sometimes fatal, results.

HERMAPHRODISM.—Zuccarelli reports ("Mercredi Med.") the case of a 33-year-old gynandric patient who presents, below normal vulva, a clitoris having all the appearances of a penis, which, when erect, is about three inches in length, which ejects a whitish fluid in coitus; below this is a narrow vagina. With the aid of the finger and



MEDICAL COLLEGE, UNIVERSITY OF VERMONT.

From Picturesque Burlington.

speculum, an infantile uterus can be demonstrated. The patient has menstruated regularly and is said to have aborted twice. In the body there is a mixture of male and female characteristics. The breasts are not more developed than those of well-nourished men. Posteriorly the neck, shoulders and elbows are female. The pelvis is of mixed type. The patient at first wore female dress, but when the beard grew she dressed in male attire. At Naples she shaved her beard and became a prostitute. She was kept by a stable-man until she fell in with a midwife of doubtful morality who counseled her to let her beard grow and exhibit herself. She long lived as husband with the midwife. At present she lives as wife with a 60-year-old man without ceasing her relation with the midwife. She prefers a female to the male. She refuses all feminine occupations and occupies herself in male labors.

ICE (N. Y. "Med. Times") applied to the external genitals (the scrotum in men, and the labia majora in women) controls epistaxis and hæmoptysis.

INSANITY.—If insanity is on a rapid increase, as would appear to be indicated by the figures quoted, it behooves insurance examiners and all who are called upon to select risks to scan applications very carefully for evidence of unusual nervous manifestations, as well as environment and family history. An increase of 660 per cent. in Illinois, for instance, would seem to call for extra care in selection from that State. The same is true in regard to Kansas, with her increase of 600 per cent., and little Rhode Island, with her 400 per cent. There is food for thought in these figures.—*The Medical Examiner*.

A CASE OF ANGINA PECTORIS FOLLOWED BY RAPID DEATH.—Simorim (*Medical Bulletin*, August 19th, 1894) reports this case of a patient, a cavalryman, aged 29, who was under treatment for gonorrheal orchitis. He was awakened at 1 A. M. by an attack of angina pectoris, lasting four or five minutes. At 9 A. M. he suffered a second attack with considerable pain, and for a lengthy period. At 11 A. M. a third paroxysm caused death. The autopsy showed a granula-fatty

degeneration of the myocardium. The anterior coronary artery was obliterated by a thrombus of recent growth, which was attached to wall of vessel and rested upon an ulcerated atheromatous plate. The posterior coronary and aorta were also atheromatous. The case is remarkable, because it appeared in a man comparatively young. The attack during sleep is more noticeable, inasmuch as such attacks usually take place during a walk, during work, or after a meal. The rapid course of the disease is also most unusual.

COCAINE AS A POISON.—The evidence to prove cocaine a poison is now so ample that no excuse will avail to exonerate the doctor who, not heeding the lesson taught by the gruesome record, fails to use it with the care its toxic energy demands.

It is a drug peerless for good, in certain conditions, but its power for ill must never be lost sight of if one would conserve the best interests of those on whom it may seem wise to use it.—Mattison in *New England Medical Monthly*.

DR. F. E. MAINE says in the *American Med.-Surg. Bulletin*.—The contraction of syphilis does not at present indicate, as it formerly did, that necessarily licentiousness has played any part in its taking. It is so common among all classes, and in all places, small and great, and the business and friendly relations are so intimate between all places that we can almost daily record some new means of infection, some novel way in which the dread poison has been conveyed from the possessor to the innocent.

GONOCOCCI.—Finger, Ghon, and Schlagenhauser (*Allg. Wiener Med. Zeitung*, Aug. 14, 1894) found that streak cultures from gonorrheal pus, on urine-agar in Petridishes, gave the most satisfactory results, although human serum was a little more reliable in producing an abundant growth in case the gonococci were scanty in the pus. They thrive best at 97° F. (or between 86° and 102° F.) From 77° to 86° F. they grow only scantily. Above 104° they die out rather rapidly. They remain alive in pus only till that becomes dry, which is a point of medico-legal importance. The culture medium must be kept moist. Acid media are better than alkaline.

CASTRATION FOR HYPERTROPHY OF THE PROSTATE GLAND.—

In the early days of ovariectomy it was accidentally observed that the uterus undergoes a marked degree of atrophy after the removal of the ovaries. Acting upon this discovery, the same operation has been successfully resorted to for the purpose of causing the involution and absorption of fibroid tumors of the uterus. Now, the prostate gland is the male analogue of the uterus, as the testicles are also the male analogue of the ovaries. Reasoning on this line, Prof. J. William White, of the University of Pennsylvania, has devised the operation of the removal of the testicles in old men for the relief of enlarged prostate, with difficulty of urination. The operation has now been performed many times with most gratifying success. This is the surgical lesson of the year. We hope no foreign operator will try to deprive Prof. White of the honor of priority in it.—*The Medical World*.

THE INCISION IN ABDOMINAL SURGERY.—Dr. Carstens, of Detroit, gives the following summary of his views:

1. With a small, narrow-bladed, sharp knife, make a clean incision through the skin of the necessary length, and with another sweep or two cut through the linea alba, muscle, etc. Lift the peritoneum with your fingers, open it and enlarge the incision.

2. In closing the abdominal incision use animal ligature, kangaroo tendon and catgut. First carefully bring together the peritoneum in a running stitch, then the transversalis fascia, and the rectus if the incision is through the muscle. Then carefully bring together edge to edge the tendinous insertion of the oblique muscles. The fat and loose cellular tissue above can be brought together in one or two tiers, according to thickness. Bring the skin together carefully with Marcy's cobbler stitch, thus burying all your sutures. Then seal with collodion.

3. In cases of extensive umbilical, ventral or other hernias, it is best to bring the peritoneum together with an over-and-over stitch of kangaroo tendon or catgut; to make a flap splitting operation of the ring, which is brought together with silkworm gut or silver wire, which are buried, and then the fat and skin are united with the buried animal suture.—*Four. Am. Med. Assoc.*

A NEW AND SUCCESSFUL TREATMENT OF TYPHOID FEVER.

Some time ago Dr. Hugo Summa, of St. Louis, Mo., a thorough physiologist and skillful practitioner, in considering the fact that there is an almost total absence of the usual signs of bile in the fæces of patients suffering from typhoid fever, came to the conclusion that possibly some of the distressing features of late typhoid may be due to a deficiency of bile, and determined to try the introduction of ox-gall into the lower bowel in well marked cases of the disease. This plan has now been carried out in a considerable number of cases, and with the happiest results thus far—not a single death having occurred when the bile treatment has been instituted,—whereas in a similar number of contiguous cases of apparently the same degree of severity, the usual fatality has been noted.

The treatment is as follows: Two ounces of fresh bile (which can be obtained at any packing house and kept for two or three days if the air be excluded) may be mixed with from two to eight ounces of water and thrown into the rectum with an ordinary household syringe: Some patients cannot endure the bile of this strength as it sometimes is quite irritating to the rectal mucous membrane; in which cases as much as fourteen ounces of water must be added to the two ounces of bile. The injection is given every night and morning.

Under the influence of the bile, conjoined with proper feeding, the course of fever has been very favorably modified in instances where the disease was far advanced when the new treatment was begun; in one patient at the City Hospital, recovery resulted even after three severe hemorrhages had occurred, and in a large number of cases of typical typhoid in which the treatment was employed before the end of the first week the disease was checked in a very few days.—*St. Louis Clinique.*

NEWS, NOTES AND FORMULA.

The Railway Surgeon officially announces a change of editorship. By action of the officers and executive committee of the National Association of Railway Surgeons, Dr. R. Harvey Reed was "deposed" and Dr. W. B. Outten of St. Louis was elected editor, and Dr. S. D. Westcott of Chicago, associate editor. Sorry; Dr. Reed is an able editor as well as surgeon.—*The Medical Examiner*.

TUBERCULOUS MEAT: IS IT UNFIT FOR FOOD?—Leclainche, of Toulouse (*Revue de la tuberculose* July, 1894, p. 133), collates the results of many experiments, and considers that there are no authentic cases of tuberculosis arising from the ingestion of diseased beef, and that it is very rare that we can experimentally transmit the disease even by inoculating diseased meat into guinea-pigs, the most susceptible of all animals to the infection. It is proper to authorize the consumption of all tuberculous meat after it has been completely sterilized by heat, says Leclainche.

SALICYLATE OF SODIUM IN CANCER.—In a case where the bone has become involved, secondary to cancer of the breast, Aikman obtained decided relief of pain by the administration of salicylate sodium, in doses of ten grains three times a day. Large doses of opium had been given in vain.—*Glasgow Medical Journal*.

ANÆMIA.—In anæmic cases the following may be employed:

R Strychniæ sulph., gr. $\frac{1}{3}$.
 Tinct. ferri chlor., dr. ij.
 Vini ergotæ, dr. ss.
 Syr. simplicis, dr. iss.
 Aq. dest., q. s. ad dr. vj.

M. Sig. Teaspoonful three times a day.—*Medical Press and Circular*.

There is a short sketch and an excellent picture of Dr. A. B. Bisbee in the *Medical Examiner* for November.

There are at present ninety-eight members of the medical profession in the French Legislature, sixty-one of whom are deputies, and thirty-seven senators.—*British Medical Journal*.

VOMITING OF PREGNANCY.—For stubborn cases, Dr. Julian Berry of Mace, Ind., recommends, in the *Memphis Med. Journal*:

R Fl. ext. valerian, oz. j.
 Fowler's sol. arsenic, *m* xvj.
 Sod. bicarb., oz. j.

M. Sig. Teaspoonful every two or three hours.—*Ex.*

If every medical college in the country would teach their students how to give anæsthetics, there would be fewer deaths from so-called shock.—*The Denver Medical Times*.

The Massachusetts Cattle Commissioners have decided to establish a laboratory in Boston, beginning with the new year. The new department will be located at 50 Village street, above the present offices of the Board. Dr. W. F. Whitney of the Harvard Medical School has been chosen director of the laboratory and he will have an assistant who is already selected.

The Board has decided upon this step in the interest of economy, convenience and uniformity. Now that the work is increasing at a surprising rate, owing to the tuberculosis crusade and parts of animals are being received daily for examination, it is absolutely necessary that there should be some place provided where the inspection can be carried on.

INSTRUCTION IN INSURANCE EXAMINATION.—At the Vermont Underwriters' banquet held at Montpelier, November 1, Dr. Grinnell of Burlington spoke for the medical examiner, and said that no class of men were more pleasant to meet than insurance men. "The agents of many companies," he said, "are many of them distinguished gentlemen." He thought healthfulness was the basis of life insurance, and



THE MARY FLETCHER HOSPITAL.

From Picturesque Burlington.

so it is absolutely necessary that the doctors come in as the middle man in the business. Dr. Grinnell said he represented the first institution in the country which regarded the subject of life insurance of sufficient importance to establish a course of instruction in insurance examination, the medical department of the University of Vermont. He thought that the great fault of many companies is that they do not show more care in selecting clients.—*The Medical Examiner*.

Three American medical colleges have special instruction in life insurance examinations—namely, University of Vermont, the College of Physicians and Surgeons of Boston, Mass., and the Kentucky School of Medicine. Graduates from these schools, therefore, should be well fitted for insurance examiners, other things being equal.—*The Medical Examiner*.

PALPITATION OF THE HEART.—

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M. ft. pulv. No. xxx. Sig. One pill three times a day.—*Ex.*

PAINFUL DENTITION.—

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 Tinct. of conium,
 Syr., aa dr. ij.

M. Sig. Rub on the gums several times a day.—*N. Y. Polyclinic.*

BOOK REVIEWS.

Clinical Diagnosis. By Albert Abrams, M. D., Professor of Pathology, Cooper Medical College, San Francisco, etc. New York: E. B. Treat; 1894. Price \$2.75.

This excellent work treats of special subjects in a complete manner, and general diagnosis in a comprehensive and well arranged form. In fact its particular value comes from its tabular arrangement and relation of the various topics to each other. It combines the requirements of a text-book and a book of reference as far as possible, and is a work eminently fitted for the use of the physician and the medical student.

A Practical Treatise on Diseases of the Hair and Scalp. By Geo. T. Jackson, M. D., Chief of Clinic and Instructor in Dermatology in College of Physicians and Surgeons, etc. E. B. Treat, 5 Cooper Union, 1894. Price \$2.75.

A scientific statement of what is known concerning the diseases of the hair and scalp and the diagnosis and treatment of the same. A valuable book as to detail, treating the subjects plainly, yet in a thoroughly scientific manner, showing the author's thorough knowledge with the various conditions.

It will certainly prove a valuable addition to the literature of the subject and is a success in every way.

Right here, allow us to say that all of the works published by Mr. Treat are elegantly bound and present a neat and most attractive appearance.

The Pocket Anatomist. By C. Henri Leonard, A. M., M. D., Prof. of Gynæcology, Detroit College of Medicine. Leather, 300 pages, 193 illustrations, post-paid \$1.00. The Illustrated Medical Journal Co. publishers, Detroit, Mich.

The 18th edition of this popular anatomy is now before us ; it is printed upon thin paper and bound in flexible leather so as to be specially handy for the pocket. The illustrations are photo-engraved from the English edition of Gray's Anatomy, so are exact as to their details. Three large editions have been sold in England, testifying to its popularity there, and some sixteen thousand copies have been sold in this country. It briefly describes each artery, vein, nerve, muscle and bone, besides the several special organs of the body. It contains more illustrations than any of the other small anatomies.

PUBLISHER'S DEPARTMENT.

Being convinced of the value of Kola as a tonic stimulant, and desirous of presenting a preparation which should contain the active medicinal principles of the drug, yet free from its acrid and bitter taste. Messrs. Frederick Stearns & Co., of Detroit, Mich., after long study and experimental investigations have, by an original process, produced a preparation, "Stearns' Kola Cordial," which is one-fourth the fluid extract strength, and is palatable and delicious in taste. It has been tested in several large hospitals, and in the private practice of many prominent physicians.

Dr. E. B. Smith, of Detroit, Mich., in speaking of the preparation says: "Kola Cordial in my hands has supplied a great want. It seems to be a systemic tonic, acting especially upon the nervous and vascular systems. The action upon the circulatory system is a peculiar one, and in surgical cases where I have administered it seems to be a valuable addition to our armamentarium."

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Dr. W. W. Bulette in his article on Acute Otitis Media says: "After the hyperæmic stage has passed and the inflammatory symptoms have begun to subside and the discharge has appeared, the ear should be syringed with hot water, first dropping into it 5 or 6 drops of a 3-per cent. solution of pyrozone,—H₂ O₂ (McKesson & Robbins). The douching should be kept up at each consultation until the epidermis of the canal assumes the appearance of "washer-woman's hands" after which the canal should be thoroughly dried with cotton on the end of a probe."—*Medical Bulletin*.

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ANNOUNCEMENT.

E. B. TREAT, Publisher, New York, has in press for early publication the 1895 INTERNATIONAL MEDICAL ANNUAL, being the thirteenth yearly issue of this eminently useful work. Since the first issue of this one volume reference work, each year has witnessed marked improvements; and the prospectus of the forthcoming volume gives promise that it will surpass any of its predecessors. It will be the conjoint authorship of thirty-eight distinguished contributors and specialists from America, England and the Continent. It will contain the progress of Medical Science in all parts of the world, together with a large number of original articles and reviews by authors on subjects with which their scientific reputation is identified. In short, the design of the book is to bring the Practitioner into direct communication with those who are advancing the Science of Medicine, so he may be furnished with all that is worthy of preservation, as reliable aids in his daily work. Illustrations in black and colors will be freely used in elucidating the text. A most useful investment for the Medical practitioner. The price remains the same as heretofore, \$2.75.

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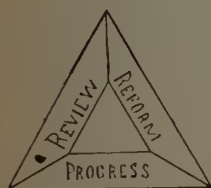
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February, 1895.

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*A Journal of Review, Reform and Progress in the
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(Original Papers)

TUBERCULOSIS IN THE LOWER ANIMALS AND ITS RELATION TO PUBLIC HEALTH.

By FRANK A. RICH, V. S., M. D., Burlington, Vt.

Read before the Vermont State Medical Society, Oct. 8, 1894.

Tuberculosis has been known and described for many centuries. Four hundred years before Christ, Hippocrates, describing caseous abscesses, so characteristic of tuberculosis, called them tubercles. Since that early age it has been known under a variety of names, and at different periods has been more or less confounded with other infectious diseases.

As early as the Middle Ages it was considered contagious, and the flesh of animals affected was abandoned as an article of food, although it was not clearly differentiated from syphilis, and later was confounded with glanders; but more careful investigation showed that while these diseases did resemble each other somewhat in their insidious character and gross post-mortem appearances, yet they were each distinct from the other. Then it was that the theory of heredity began to be advocated. This finally became generally accepted by the profession, and from this time on the idea of contagion was practically abandoned by medical men until Villemin's telling experiments in 1865. The common people of Southern Europe who suffered from the immigration of consumptives to their more healthful climate, and many veterinarians who witnessed its ravages among domesticated animals still held to the belief in its contagious character, and a few, more fearless, boldly proclaimed it from time to time, with little effect, however, upon the minds

of medical men, until the researches of Villemin actually drove them to investigate the matter, either to prove or refute the truth of his assertions, though with more willingness to do the latter. Several entered zealously upon the task, and as the investigation proceeded many were constantly added to the rank and file and most careful and painstaking experiments were performed, resulting finally, in 1882 in the discovery, by Dr. Robert Koch, of the bacillus tuberculosis and the establishment of its causal relation to tuberculosis.

We find tuberculosis in all the different species of domesticated animals, and even in wild beasts (particularly those in captivity). Among the domesticated animals it is more prevalent in cattle, fowl and swine than among horses, sheep, dogs and cats, but the latter readily contract the disease when inoculated, either intentionally or accidentally.

The lack of systematic professional inspection of live and slaughtered animals, as well as the actual variations in the extent of the disease in different localities, give us somewhat contradictory data regarding the prevalence of bovine tuberculosis.

Probably many of the estimates given by various authors are based on faulty or insufficient data. The following examples may serve to some extent to indicate its prevalence. The extremes are wide, being from 0.02 per cent (among 2,273,547 cattle, mostly steers, killed in the meat inspection districts of the United States from May 15, 1891 to March 1, 1892) to 60 to 70 per cent (at Hildesheim, Hanover, according to Haarstick). In a large number of German abattoirs it is stated that 6.9 per cent of the cows, 3.6 per cent of the steers, 2.6 per cent of the bulls and 1 per cent of the young stock were tuberculous. Of 1,270,604 animals slaughtered in German abattoirs from October 1888. to October 1889, 26,352, or 2 per cent, were tuberculous. Careful post-mortems by skilled veterinarians showed 12 per cent of tuberculous animals out of 12,000 slaughtered in England as affected or exposed to contagious pleura-pneumonia (a disease entirely distinct from tuberculosis). In seventeen counties in New York State the inspectors of the State Board of Health found 3.4 per cent tuberculous cattle out of 20,000 inspected. Cattle slaughtered at Baltimore were found tuberculous to the extent of from 2.5 to 3.5 per cent, while of 1,153 cattle from the Eastern States (mainly New England) slaughtered at Brighton, Massachusetts, 52, or 4.5 per cent, were tuberculous. Salmon and Smith state that "it is not far from the truth to assume that one of

every fifty head of cattle in the more densely populated areas of Europe and America is tuberculous." Dr. Salmon states yet later, however, that "the ideas in regard to the prevalence of tuberculosis have been radically changed by the facts brought out in using tuberculin."

The fine showing of the Western abattoirs is mainly due to the fact that the beeves killed there are grown out of doors, are slaughtered while still young, and because as a rule only healthy animals are shipped to and accepted by them. On the other hand, Eastern and foreign abattoirs more often deal with stall-fed animals and with old cows, in both of which the proportion of disease is higher.

During the present year, in connection with work for the State Board of Agriculture and in my own private practice, I have had occasion to test with tuberculin over one thousand head of cattle, besides making physical examinations of many herds. Up to July 1st, out of 941 head of cattle tested from ninety herds, I condemned 222, and slaughtered and made careful post-mortem examinations on 220, verifying the diagnosis in every instance, and showing the disease to be distributed in the various parts as follows: Lungs, 82 per cent; bronchial glands, 61 per cent; post-pharyngeal glands, 18 per cent; mesenteric glands, 22 per cent; lymphatic glands in general, 16 per cent; portal glands, 6 per cent; liver, 14 per cent; intestines, 2 per cent; udder, 22 per cent; pleura, 7 per cent; super-mammary glands, 23 per cent; peritoneum 3 per cent; spleen, prescapular gland and testicles, each 2 per cent; uterus and ovaries, each 1 per cent.

Tuberculosis is exceedingly prevalent in city dairies and herds supplying milk to large towns and cities. The cows are picked up one or two in a place from different herds in the surrounding country. Some of these are infected, and when placed in herds subjected to the predisposing influences of close stabling, artificial feeding and forced lacteal secretion the disease rapidly spreads throughout the entire herd. The percentage of tuberculous animals among family cows in small villages depends largely upon the prevalence of the disease in the herds from which they are selected. In testing all the cows in the village of East Burke, seventy-seven in number, we found four (5 per cent) tuberculous, and out of fifty-seven in St. Johnsbury, six (10 per cent) reacted to the test and were destroyed.

Tuberculosis in the bovine tribe may be local or general. Many of the apparently localized cases, however, prove upon careful post-mortem examination to be more or less generalized. While all forms

of tuberculosis must be considered identical in their origin and the primary lesion in each to be tubercle, clinically we are able to recognize two varieties, acute and chronic, although we rarely get the acute miliary form in cattle ; the acute form which we do notice resembling more nearly the acute phthisis of man. It is not very common, but occasionally met with in stables where there is a great abundance of the infection, the animal bearing a strong predisposition to the disease. It is characterized by cough, capricious appetite, rapid emaciation, frequent pulse, increased respiration, constant elevation of temperature and a general cachetic appearance, the end sometimes hastened by colliquative diarrhoea ; in short, following a course not unlike its analogue in the human family.

Post-mortem reveals lungs mottled and broken down with large cavities filled with pus and caseous material, bronchial and pharyngeal lymphatic glands diseased, but not so much enlarged as in the chronic form. The intestinal, mucous membrane and mesenteric lymphatic glands are generally involved to a greater or less extent.

The form of tuberculosis most commonly met with in cattle is decidedly chronic, and might very properly be called chronic disseminated tuberculosis. It is general in character, manifesting itself in a variety of organs, like chronic general tuberculosis in man, but running a much slower course. It is characterized by the formation of numerous isolated or conglomerated nodules, occurring in the serous membranes, in the lymphatic glands, lungs, liver, spleen, intestines, joints, bones, genito-urinary organs and udder. These nodules on the serous membranes are the most characteristic, and it is they which have given this disease its German name, *Perlsucht*. They vary in size from that of a small pea to that of a large hen's egg, and are liable to become caseous or ultimately cretaceous. The lymphatic glands are affected generally, especially the pharyngeal, prescapular, bronchial, portal, mesenteric, inguinal and supermammary. The bronchial often grow to enormous dimensions increasing from one and a half inches to nearly a foot in length. They are very prone to caseous degeneration and calcareous deposition.

The lungs rarely escape infection, varying in extent from a few small caseous nodules in the apex of one or both to the formation of large caseous masses, frequently partially calcified, and large cavities filled with creamy pultaceous pus, together occupying the greater part of one or both lungs. The ovaries and uterus are not infrequently

involved, the interior of the latter in some previously sterile cows being completely studded with tubercular nodules. The udder, and, more particularly, the lymphatic glands in connection with it, show marked infection in quite a large percentage of cases, the frequency of tubercular mastitis being probably due to the great activity of the gland, consequent upon feeding enormous quantities of food calculated to produce the greatest possible amount of milk. Since the most common form of bovine tuberculosis involves any and sometimes nearly all organs of the body, the symptoms are necessarily vary various and uncertain, and, singularly enough, not infrequently entirely absent until late in the disease, and, while writers in veterinary medicine write page upon page describing the symptoms, and, while it is comparatively easy to make a diagnosis when in the advanced stages, yet it may exist in a cow for months and even years, she remaining the source of greatest danger, without presenting to the casual observer, owner or attendant the slightest indication of disease. Incredible as it may seem, animals receiving good care will, unless the disease be far advanced or developed into the acute form, keep in good condition, feed well and give a fair amount of apparently normal milk, and yet when destroyed an autopsy will reveal extensive tubercular lesions of the lungs, liver, serous membranes, udder, lymphatic glands and sometimes nearly all the viscera. This great difficulty of diagnosis in cattle has always been a source of much annoyance to veterinary examiners, and it was almost impossible to rid a herd of all diseased animals, until the adoption of the tuberculin test. I have tested herds in both New York and Vermont that had been regularly examined for years by competent veterinarians, and from which all cases easily detected by a physical examination had been carefully weeded out, yet over fifty per cent. of the remaining animals reacted to the tuberculin test, and subsequent post-mortems confirmed the accuracy of the diagnosis in every instance.

This test consists in the hypodermic injection of from $\frac{3}{4}$ to 3 c. c. of a 10 per cent. solution of tuberculin prepared in a 1 per cent solution of carbolic acid, the quantity used being regulated by the size, age and temperament of the animal to be tested. Before injection the temperature is taken several times, one or two hours apart, to ascertain the normal range of temperature. The injection is usually made in the evening, and the animals are kept confined and without water during the night and following day. After about eight hours the temperature is taken at intervals of two hours. The normal temperature of cows

varies from 99.5 to 102.5, the average being about 101.5. An increase of two degrees over normal temperature after injection is ground for suspicion, unless there is other evident reason for it, while greater temperature reaction makes the case even more clear.

The action of tuberculin seems to be to cause an active hyperæmia about the tubercular areas and a condition of temporary increased activity of the disease process, accompanied by lassitude, anorexia and often a chill, followed by pyrexia, the temperature suddenly running up from two to eight degrees, where it remains for a few hours, then gradually returns to normal.

Tuberculin was first used as a diagnostic agent in 1891, by Prof. W. Gutmann, of the Veterinary Institute, Dorpat, Russia. The Tuberculosis Commission of the Veterinary Department of the University of Pennsylvania was the first to use it in this country, late in the same year. Since, many experimenters in this and other countries have employed it and have generally found it a safe and reliable means of diagnosis. It is an extremely delicate test, and great precaution is necessary to rightly interpret results, for apparent reactions often occur and are apt to mislead the unskillful.

Swine tuberculosis is much more common than is generally supposed. Voelkel inspected 2,315 hogs slaughtered during three months in the abattoir at Elbing and found 91 animals (nearly 4 per cent) tuberculous, 89 of which showed both thoracic and abdominal tuberculosis.

My experience with this disease in hogs during the last eight months has been principally where I have tested cows, but have found it necessary to destroy over a hundred, besides condemning the meat of several which I have been called upon to inspect after slaughter, some of which appeared perfectly healthy before death. In most cases, however, hogs affected with tuberculosis are more or less unthrifty, owing doubtless to the fact that the disease runs a much more acute and rapid course than in cows. The lungs, abdominal and submaxillary glands are most often affected. The caseous and calcified areas so common in tuberculous organs in the bovine species are rarely seen in hogs. The lungs soften and break down rapidly, forming large ragged cavities with suppurating walls.

Among fowls tuberculosis seems to be quite prevalent, and in them also the disease seems to assume a more acute and purulent form, and is manifested by more unthriftiness than in cattle.

It is occasionally met with in cats and dogs, and less frequently in sheep and horses.

We recognize the bacillus of Koch as the sole exciting cause of tuberculosis in all these different species of animals, but since it is often inactive in the absence of certain or predisposing causes they become of profound clinical importance. The inherited tendency is very pronounced in certain families of lower animals, particularly in cattle and pigs, but actual hereditary transmission of the disease is rare.

Close confinement with imperfect ventilation; faulty breeding, as in and in-breeding, early, late, frequent and intensive breeding, and in cows excessive milk production, are some of the more common predisposing causes. Nearly every detail of domestication tends to engender feebleness of constitution and consequent predisposition to tuberculosis.

It is not uncommon for a cow from a herd known to be tuberculous when placed in a previously healthy dairy to initiate an outbreak of tuberculosis. Sometimes we find only one or two on each side of such an animal tuberculous, while the rest of the herd will be free from the disease.

On several farms where we found tuberculosis in the dairy we found it also in the hogs; sometimes in the fowls and barn cats, and on one farm it was necessary to destroy 88 per cent. of a large dairy, all the hogs, chickens, dogs and even the family cat.

What relation does this great prevalence of tuberculosis in the lower animals bear to the public health?

It is obvious that direct experiment on man with tuberculous material from the lower animals is out of the question, but almost innumerable experiments have been made whereby the disease has been successfully transmitted from man to the lower animals, giving the same symptoms and gross post-mortem appearances. Upon microscopical examination the pathology, morbid histology and bacilli are also identical with those of human tuberculous tissue.

(To be Continued.)

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CAR SANITATION.

By G. P. CONN, A. M., M. D., CONCORD, N. H., SECRETARY OF
NEW HAMPSHIRE MEDICAL SOCIETY.

(Concluded.)

In support of that part of the report which I have quoted—relating to the experiment on animals inoculated with a preparation of dust from passenger coaches—I will give an extract from the report of scientists who have recently concluded a series of experiments, under the direction of the Imperial Board of Health of Germany, as to the danger arising from the dust in railroad carriages. Their results show a decided risk involved in travelling under the present sanitary conditions of coaches :

“The dust was collected in each instance from a square metre of surface, and from forty-five compartments, representing twenty-one carriages. The inoculations were made upon guinea-pigs. Many of them died of various diseases, and the rest were killed. Three only were found to have tuberculosis. The number of bacteria was largest in the fourth-class cars, and grew less with each rise in grade of the compartments. In the fourth-class cars the number was estimated at 12,624 per metre ; in the third-class, 5,481 ; in the second, 4,247 ; and in the first-class, 2,583. On the seats and upper walls the numbers varied in the four classes from 2,646 to 29, while the roof was almost free. Though the third and fourth-class carriages were the most infected, it was much easier to clean them, as they could be washed with hot water and soap, which could not be so vigorously applied to the better class carriages owing to the carpetings and upholstery.”—Boston Medical and Surgical Journal.

The following letter written on a trip to the Eastern States, says :
“In our sleeper were three consumptives returning home to die, and that alone was depressing enough, but when, on getting up in the morning, he sees a considerable amount of dry, yellow sputum on one's vis-a-vis neighbor's bed linen, it is neither dainty or reassuring. Morning cogitations, usually so pleasant, are apt to turn to the uncomfortable possibility of all the bedding in the car being subjected from time to time to the same infection, and being probably imperfectly washed or

simply rinsed. Then it is impossible to clean the upholstering and carpeting without taking them out of the car, and an infected sleeper should be dangerous as the continual vibration keeps the dust and bacteria in the air. The space is also necessarily confined. Moreover, travelers are apt to catch cold from drafts and from sleeping close to the windows, thereby rendering the mucous membranes receptive to germ implantation. They order these things better in Europe; on some of the Continental lines special coaches are provided for consumptives, and these are constructed with particular reference to ready cleansing and disinfection at the end of every trip—which, it should be noted, are much shorter than the 'runs' in this country, and the need of precautions is, therefore, and for so much, greater here than abroad."—Dr. Douglas W. Montgomery's letter to the *Pacific Medical Journal*.

Dr. S. S. Herrick, of San Francisco, read a paper before the Section on State Medicine, at the meeting of the American Medical Association the present year, entitled "Common Carriers as Disseminators of Contagion."

The writer dwelt particularly on the disposal of excretion by the people on inland waters and railway coaches; believing that certain communicable diseases whose contagious properties are discharged from the alimentary canal is liable to reach the alimentary or respiratory tract of other persons if not intercepted or destroyed, and cholera, typhoid fever, dysentery, intestinal tuberculosis and other filth diseases are notable in this way.

He says: "Companies who provide meagre accommodations for passengers were properly censured, and should be held justly responsible if inadequate remedies were provided for their patrons."

Discussions by Drs. Ruggles and Cochran, Davisson and Stoner, all of whom were in accord with the opinions advanced by Dr. Herrick. These men, while enthusiastic supporters of preventive medicine, are gentlemen of sound judgment and are not carried away by any desire for notoriety. They believe the state and federal authorities should be ever on the alert to secure health for the individual and that it is a duty which they owe to the people of the country to have a watchful care over the transportation company as well as the municipal lines governing health officers.

The *Ohio Medical Journal* says of the prevention of consumption:

"We do not deem it wise or prudent to invade the homes of tuberculous patients for the purpose of securing disinfection or the isolation

of the sufferer. The instruction of the patient and his household, by his physician, in the necessity of prophylactic measures, is at present sufficient. But we believe that a vast deal of good might be done by the exercise of strict sanitary measures against the contamination of rooms in hospitals and hotels and the berths in sleeping cars. The most careful cleansing and disinfection of apartments occupied by consumptives should be required before other individuals are permitted to occupy them."

As we have said before in this report cleanliness is one of the first principles of sanitation whether it be a car, a house, an office, or a work shop, the same principle holds good. In the construction of coaches for passenger use, something should be done to render the cleansing of the car a matter of small expense, for while in the process of construction, little things might be done that would add to their convenience, healthfulness and cleanliness.

All passenger cars at the present time are constructed with water-closets, the floor of such closets and a few inches of the side or mop-board should be covered with sheet copper as an ordinary wooden floor will soon become filthy and can never be made clean. Odors will always be given off from an ordinary board floor whenever the temperature rises to that of summer heat ; but if the floor be covered with sheet copper, hot water, dry steam and chemicals may be used, leaving it without any absorbing surface to develop odors which may be latent in cold weather and very active on a hot summer day. If the designer and purchasing agent give attention to this in the first instance, the extra expense will be little or nothing, and will add very much to the efficiency of the car when the rules of sanitation are applied. As cars are now heated with steam direct from the engine and as these pipes pass through water-closets for the purpose of protecting them against the cold weather, I can see no reason why taps may not be placed in those pipes in water-closets and used for the purpose of cleaning them with hot steam ; and it certainly could not be but very little extra expense at the time of the construction of the car.

Dr. S. S. Herrick of San Francisco, California, in commenting upon a statute law of that state relating to the maintenance or commitment of a nuisance, remarks :

" Obviously, travelers themselves should not be held responsible for committing a nuisance, so long as transportation companies provide no facilities for obviating the same ; and the legislation should be aimed

directly at these companies, holding them responsible and requiring them to provide an adequate remedy.

"It is well understood that the law must not ordain what is impracticable, and equally plain that no serious difficulty and expense would be involved in abating such nuisances. No mechanical difficulty exists for a steamboat or railway coach to have its closet provided with a closed receptacle, having suitable means for deodorizing, disinfecting and ventilating, and for discharging the contents into some proper place at short intervals. The details of a contrivance suited to such a purpose need not here be entered into; they belong to the inventor and mechanic rather than to the sanitarian as such.

"Aside from considerations of health, it seems strange that respect for common decency has not abolished a practice in travel by land which would have brought a blush to common carriers in the good old days of slow coaches. While inventors and builders of palace cars are doing so much for the comfort and convenience of passengers in other respects, they adhere to a form of closet from which travelers must be excluded at the time when it would be most acceptable (halting at large stations), and which scatters filth and disease along the route. It is to be noted that cholera still lingers in Europe, and meanwhile we must not consider ourselves safe here within two weeks' travel by steam; while the other filth diseases, like the poor, are always with us.

"In my judgment the time has come for sanitarians to speak plainly and forcibly on the subject, and to demand of legislators a specific remedy which courts will be bound to apply to this class of offenses against health.

I understand several roads are making use of compressed air for the purpose of cleaning the draperies and plush covering of the seats; and that a plant for that purpose can be arranged to be effective, with small expense. If this is true, and I see no reason why it is not, it should generally be used, for thorough cleansing with fresh air would be a most valuable disinfectant.

The vestibule train has become very popular and no one doubts its efficiency as an easy riding coach and insures perfect safety in going from car to car, but as an object lesson for the ventilation of cars it becomes a failure inasmuch as it simply ventilates from one car to the other. Of course some air will pass into the vestibule section, but as that section has less width than the car itself the pressure of the atmosphere extending to the car is much lessened than what it is upon the

sides of the car itself, therefore but little air is forced in from that section of the construction, as the ventilating property of the vestibule is lost, and aside from that it may be overcome by the extra heat of lighting.

This leads one to consider the lighting of cars. Nearly every large road has been experimenting into the different methods of lighting coaches, and car companies like the Pullman and Wagner have done the same. Whether these experiments have been conducted in the light of sanitation, or as a question of expense may be a matter of doubt, although it is probably that the safety of the car from destruction by fire has entered into the range of experiments. Gas and kerosene lighting while moderately expensive are not only dangerous by reason of their possibility of fire, but the extra heat which they occasion in the car in the summer time, proves a very serious obstacle to the comfort of the passengers. Then again the destruction of oxygen by gas or kerosene lighting increases the amount of carbon dioxide in the atmosphere of the car, oftentimes to a dangerous extent, and in that way the health of the passengers is seriously threatened unless there is a large amount of fresh air introduced continuously.

That electric lighting is the ideal of the present time perhaps no one will dispute, unless the expense of the same is taken into account. So far as I can learn none of the devices for electric lighting have yet been brought down to the maximum of the manager's idea of expense, and, therefore, some other method will find favor until the public demand safety in lighting as well as in heating coaches.

It would not seem that it would be necessary in a report like this to make any allusion to the water supply of railway coaches, but the Medical Society of New York have adopted a report, calling attention to the danger of drinking water from the average water-tank, as found in railway cars and other public places. Many cases of typhoid fever of mysterious origin, it is said, could be traced to the filthy water-tank, which has been filled with water and ice of doubtful purity, and refilled from day to day without cleansing. Nevertheless, people must have something to drink in hot weather.

From this we may learn that the public are critical regarding the water supply. Some years since, Dr. Reed of Ohio, in investigating this matter, found that the water-tanks of ordinary coaches, and sometimes those of palace cars were notoriously filthy. The water supply must of necessity depend largely on the character of the supply at given

points along the line. When cars are cleansed and the water-tanks refilled, the ice supply depends upon the same conditions, but there can be no excuse for filthy tanks any more than in public or private houses. There are enough men employed about the trains to see that every tank is made clean day by day, and not to do so and thereby endanger the health of the traveling public becomes criminal.

In conclusion I have but little to add, as until the use of such devices for lighting, heating and ventilating we now have are fully understood and appreciated by the average trainman, who should be held responsible to his superior for the safe condition of his coach from a hygienic and a mechanical point of view, it is useless to assume that a more elaborate mechanism will find favor.

Nothing as yet approaching an automatic system in heating, lighting or ventilating of a car has been placed before the public, but as it is only a comparatively short period since automatic brakes and couplers have been placed upon the market we may confidently look forward to the time when the public demand for hygienic improvements will evolve from the mind of man, some plan or system to meet the emergencies of the occasion.

In order to do this effectually some one connected with the road would have to instruct the employe in the use of hygienic appliances, the same as is now necessary in the use of automatic brakes ; and it would seem quite practical that all roads having a surgical department, should extend this work into the domain of hygiene, and give the surgeon-in-chief authority to inspect, instruct and to hold responsible such employes as are in any way concerned in maintaining a healthy condition on our trains. The surgeon more than any other person connected with railroads appreciates the hygienic condition of coach, stations and grounds of our railroads, for in case of accident, he has much to contend with that is unknown to the physician and surgeon called to see those injured in ordinary accidents, and, therefore, will always be on the alert for all sanitary improvement.

However it may be brought about, the employe should be taught how to make the best use of all the devices in use to promote the sanitation of cars ; and should be held responsible for any unsanitary condition by reason of his negligence.

A LECTURE ON DIPHTHERIA.

BY DR. A. P. GRINNELL, Dean of Medical Faculty of U. V. M., and
Professor of the Theory and Practice of Medicine in the same.

(Reported especially for the Monthly by the Editor.)

Probably there is no disease that has been of such absorbing interest to the general profession and the laity during the past five years as that of diphtheria. It readily enlists the sympathy of the physician because of the extreme youth and helplessness of those attacked. The disease rarely appears in persons twenty-five years or over, and a death at this age is hardly ever reported. It is most common among children from two to ten years old.

The name diphtheria is derived from a Greek word meaning "parchment," the membrane of the throat having that appearance in this disease.

At first it was considered a purely local disease, but now the constitutional symptoms are easily recognized and are of the utmost importance.

Diphtheria, without doubt, has prevailed for a great many years as an epidemic or endemic disease, but under a different name. One hundred years ago it was characterized as "malignant scarlatina," when an eruption was present.

The first record of diphtheria as an epidemic was in 1837, in Massachusetts. At that time it was described as malignant scarlatina, and it travelled westward through all of the little villages and hamlets.

The disease is not confined to the rich or the poor, the high or the low. Instead it is common to all people, classes and countries.

As a general thing the disease seems to follow sewerage systems, or to be present near sink drains or damp places. People living over damp cellars where the drainage is bad, more often have the disease. Now it must not be understood that the germs of diphtheria come from fœcal discharges. This is not so, for they are found principally in the deposits of sinks, (especially wooden, because of great absorption of moisture) greasy dish water and the like, commonly called sink sewerage. Milk is an excellent culture medium and pans of milk are very likely to be full of the infectious germs in a farm house where the disease is present.

But the general aggregate of opinion seems to be that the diphtheretic germs may be produced in the best and *apparently* the cleanliest families. Something may be wrong and that something may be all that is necessary for the propagation of the disease. Soap and water only assist the development of the germs and the facts seem to show that we are exposed to them all of the time. Children, of course, from the extreme sensitiveness of the mucous membrane in their throats are more susceptible to their attack.

Until recently it was not considered possible for diphtheria to occur but once in the same person, but facts have proved differently. Several cases have been treated twice in *one* year for identical symptoms, and any number at intervals of two or three years.

Diphtheria is one of the most irregular diseases in its period of incubation known to medicine. The seventh edition of Robert's "Practice," gives the period as from *two days to two weeks*!

Boards of Health throughout the country, however, generally consider the period of incubation to be twelve days, and require an isolation of two weeks.

The disease is caused by a definite germ called the Klebs-Löffler bacillus. It is 25 millimeters long, one-eighth of a millimeter wide, and quite irregular in shape, but easily recognized by one familiar with its general appearance.

The first symptoms and onset of the disease vary greatly in different cases, though generally characterized by a feeling of languor or lassitude, loss of appetite, headache and slight fever, but no sore throat. Inside of 24 hours however, a slight inflammation appears over the tonsils and immediately a membrane is formed. The lymphatic glands, at the angle of the jaw, become swollen and very tender; temperature rises to 104° to 105° F.; pulse is weak and prostration marked in every way. The scanty high colored urine contains some albumin.

The course of the disease is very rapid. It spreads to larynx, bronchial tubes, eustachian tubes and to all the mucous membranes, throughout the alimentary canal. The heart and kidneys are affected and become degenerate; the nervous system is attacked and paralysis ensues, and constitutional symptoms of every form are produced.

Now diphtheria should not be confounded with scarlatina. The eruption of scarlatina may be present with diphtheria, but the tough membrane in the throat is characteristic of diphtheria alone.

There is no limit to the duration of the disease. It may run from two days to six weeks. Resolution may begin any time after three days; the membrane gradually disappears; the fever and headache lessens and convalescence begins, but relapses are frequent.

The prognosis is never sure; a case favorable to-day may prove fatal to-morrow, and up to the present time the mortality has been something frightful. But to-day the prognosis is good, for the mortality of 40 per cent. two years ago, has been reduced to nearly 7 per cent. at the present time! The profession has witnessed a great triumph over this dread disease, and greater victories are yet to come.

In the treatment of diphtheria, isolation is imperative. The sick room should be devoid of draperies and carpets, and the bed or couch used should be burned immediately after termination of the disease.

Absolute rest and cleanliness are essential. For local application, hydrogen peroxide has the best effect, though Listerine and preparations of the chlorides are valuable. Ice has been considered of use for external application to the throat, but is not regarded so now, and hot water and mustard are positively believed to be harmful. The air should be saturated with the fumes of the coal tar products, or lime, for these act as a solvent of the membrane. Right here it should

be said that the membrane should never be touched or peeled off, for doing this leaves a surface far better adapted for the increase of the germs.

Paralysis is anticipated from first to last. Small doses of bi-chloride of mercury are administered as a preventive, the mercury being a good germicide and thus preventing the germs from attacking the nerve centres. There is no remedy so universally accepted by the profession as alcohol, given internally to prevent decay and degenerations of the tissues and organs. It is also effective as a preventive, and those attending diphtheretic patients, or liable to exposure, by taking a teaspoonful of an alcoholic stimulant before meals, will avert the disease. Depressants must be avoided, as well as heavy diet, and nourishment should be given at *regular* intervals, regardless of sleep.

The decrease in the enormous death rate has been due to the recent progress in the various treatments of the disease, foremost of which is the celebrated anti-toxine discovery. Dr. Roux of Paris, and Behring of Berlin, working along the line of Koch's treatment of tuberculosis, injected 5 c.c. of a pure virulent culture of the Klebs-Loeffler bacillus into the blood of the horse and found that a true case of diphtheria was produced, though of a mild type. As soon as the symptoms had subsided, another larger injection was made and the disease was again produced, though of a still milder type. This process was continued with increased doses, each time with lessened symptoms, until at last an injection of an enormous amount had no effect whatever and the horse was said to be immune. From this animal a quantity of blood was drawn and allowed to stand until the serum and the clot were separated. Then the serum was drawn off and this fluid according to the theory is the anti-toxine. A special syringe of the capacity of 25 c.c. is used, and this full, is the amount of the ordinary injection. Care of course is taken to render the syringe aseptic.

Application is made at the abdomen and absorption takes place immediately. One injection is generally sufficient. In about 12 hours the membrane dissolves: the infiltration of the glands is overcome, and the patient expectorates freely. The disease is conquered. A second injection is hardly ever necessary but may be administered after 24 hours if no effect has been produced by the first.

Science has struck the key-note at last and, without doubt, the profession is on the right track to overcome many diseases hitherto supposed to be incurable.

The methods will probably be simplified in many ways. The government is to take hold of the matter of providing the diphtheretic serum and in the course of a few months it will be accessible in every part of the country where needed. Great results are looked for and the prospects are that we will not be disappointed.

DOES VERMONT NEED AN INSTITUTION FOR THE CARE AND TREATMENT OF AFFLICTED CHILDREN?

A subject which is bound to receive more or less attention, from the medical fraternity and progressive people of Vermont, is the advisability of founding in the near future, an institution for the care and education of feeble-minded children.

The principle argument against such a venture, is that there are not enough cases of this nature in the state to warrant the undertaking. But every physician of even moderate practice, must know that for every known case, there are five times as many unknown to all except to the immediate family in which they occur.

Parents seem to think that it is the acme of disgrace for their child to be idiotic, and naturally dislike to have the garrulous public know of there affliction. And so their secret is kept inviolate, the living skeleton of the family closet.

But if the hope of a possible cure could be held out to them, or even improvement in any degree, they would not hesitate to crush down their scruples, and accept the advantages offered.

Many of these families cannot afford to send their afflicted one to the large Massachusetts or New York institutions. The expense of three hundred dollars is too much for them. But with a local institution presenting equal advantages with any, and under the control of the state, this difficulty of individual expense would be eliminated.

Now this should by no means be construed to convey the idea that the institutions quoted are excessive and too high. They certainly are not, for they are free to all feeble-minded children in the respective states in which they are located, and this price of three hundred dollars is only charged to those cases coming from other states. This is but right, for no state can engage to support the weak-minded of another.

Let each state have its own then, and if it is true that there are not enough cases of idiocy to justify a special institution, let us have one that will comprise orthopedic and pædiatric departments.

Surely there are more than enough cases in all these branches in Vermont to warrant the establishment of an institution for afflicted children.

There seems to be a local demand for such a move, and the situation calls for concerted action. Those interested should commence agitating the matter, arrive at definite conclusions and present the subject with convincing arguments to the next Legislature.

Anything to be accomplished must be worked and worked well. Nothing was ever achieved by words alone.

If it can be proven conclusively (and we think that it can) that there is a definite need in this special field of caring for the imbeciles of the state, together with that of treating the diseases and deformities of children, the good people of Vermont will promptly respond.

May all true Vermonters, give to this important subject, at the very least, their earnest attention.

DEATH FROM GLANDERS.

BY DR. J. W. HULKE.

On August 20 a man, aged forty-three, a cab proprietor and driver, was kicked by a mare which had been ailing and unfit for work for some weeks and had had a nasal discharge for two days. On the same night the animal died, it was alleged, from "inflammation of the lungs." Except for one visit to a hospital to have the lacerated wound on his right thumb dressed, deceased had no medical treatment for three weeks. On September 14 he consulted Mr. Finzi. On that date there was a thin discharge from the wound. The temperature was 101.4°F. , and the pulse 70. There was no ulceration of, and no discharge from the nose or mouth. The epitrochlear and axillary glands were not enlarged. There was a red and acutely tender spot on the right shoulder, and another over the right tibia. Nothing wrong was detected in the viscera. The urine was loaded with urates, but contained no albumen and no sugar. Every day fresh nodules appeared in the muscles of the limbs, attended with great pain, especially near the joints. Six weeks after the infliction of the wound a "pustular eruption" was noticed on the face, scalp and limbs. The temperature generally was 101° in the morning and 103° to 104° in the evening. There were no rigors. Toward the end there were marked delirium, vomiting and diarrhœa. On the day before death the temperature fell to 97° . At the post-mortem examination typical glanderous lesions were observed. There was a characteristic eruption most marked on the face and upper part of the body. In several parts of the body, and especially in the muscles, the nodules before referred to were in various stages of development and disintegration, and suppuration had in most instances supervened. With the exception of the lungs, which were thickly studded with deposits, the viscera were not affected. The oral, nasal, laryngeal and tracheal mucous membrane were free from invasion. There seems no reasonable doubt that in this case the inoculation took place on the same date as the infliction of the wound on the thumb, and that the mare in question was the source of infection.—*Lancet*.

LECTURE NOTES FOR STUDENTS.

NOTES FROM THE LECTURES BY PROF. J. B. WHEELER
ON SURGERY.

Bacillus classified according to shape.
 Sub classes classified according to color.
 Micrococci.—Berry—round.
 Bacteria.—Rod shaped.
 Spirilla.—Wavy, spiral.

CLASSIFIED AS TO COLONY.

Diplococci.—In pairs.
 Staphylococcus.—Bunch of grapes.
 Streptococci.—Chains.
 Pyogenic.—Pus.
 Saprophytic.—Putrefaction.
 Pathogenic.—Disease.
 Staphylococcus Pyogenes Albus.—Pus.
 Staphylococcus Pyogenes Aureus.—Pus.
 Aerobic.—Require oxygen.
 Anaerobic.—Cannot live in oxygen.
 Obligate.—Require large amount of Oxygen.
 Faculative.—With or without oxygen.
 Phagocytes.—W. B. C.

Conditions favorable to development of Bacteria.—Heat 75 to 104° F, moisture, absence of light, alkaline medium, and organic matter of low vitality.

Saprophytic.—Most fav. temp. 75°F—104.

Pathogenic.— “ “ “ 86 104.

Pyogenic.— “ “ “ 86 104.

May be destroyed by

Natural.—Phagocytes.

Chemical.—HgCl 2. Carbolic Acid.—Hydrogen peroxide.

Mechanical.—Scrubbing, etc.

K. Permanganate.—Sat. sol. followed by Oxalic Acid. Followed by a sol. of Lime water.

HgCl 2.—1-1000—1-5000.

Carbolic Acid.—1-20—1-40—1-60.

Double Cyanide of Hg and Zn.

Iodoform.—Acts by the liberation of free Iodine and by its drying powers.

Gonococcus.—In gonorrhœal pus. Cocci in twos, similar to grains of coffee.

POINTS FROM THE LECTURES BY PROF. A. P. GRINNELL ON PRACTICE.

Pain.—Peritonitis at Umbilicus increased on pressure.

Pain.—Enteritis relieved on pressure.

Passage of gall stone is referable to upper right side margin of eighth rib.

Headache.—Frontal—disturbance of the stomach, constipation.

Top of the head.—Uterine disturbance.

Back of the head.—Eyes or Brain.

Nausea and vomiting are always present in cerebral spinal meningitis.

Rusty sputum is pathognomonic of pneumonia.

Coma.—Deep sleep caused by many things—opium, alcohol, concussion, compression, epilepsy, apoplexy, catalepsy, cerebral hyperaemia, cerebral anaemia, uraemia or belladonna.

Chill. —Due to pressure on the peripheral ending of sensory nerves which cause a disturbance of the circulation.

Chill is always recurrent in pelvic abscess.

Ascites.—Accumulation of water in the peritoneal cavity, due to obstruction of the portal circulation.

Anasarca.—Accumulation of water all over the body in the cellular tissue, due to disease of the kidney or heart.

Aphonia is loss of voice.

Aphasia is loss of memory of words.

Inflammation—Derangement of nutrition, may be known by Heat, Pain, Redness and Swelling, caused by friction, irritation, injury, etc. Characterized by active hyperaemia or congestion, by active multiplication or proliferation of cells of a tissue or organ.

Inflammation is controlled by

(1) Cold.—Contracts capillaries.

(2) Heat.—Brings blood to surface.

UNIVERSITY OF VERMONT, MEDICAL DEPARTMENT.

The forty-second annual course of lectures was inaugurated January 17, with the opening address on the "Value of Chemistry," by Prof. C. Smith Boynton. The address was exceedingly instructive, and was well appreciated by the students.

The regular lectures commenced the 21st, with the largest attendance of matriculated students in the history of the college.

A great many of the old students are back, and hard at work. The new men, to a large extent, are aimlessly wandering about, but in the course of a few weeks, they will fit into their places and the world will know them no more.

MARY FLETCHER HOSPITAL.

At the annual meeting of the board of directors of the Mary Fletcher Hospital, the following officers were chosen to serve for the ensuing year: President, M. H. Buckham; vice-president, Henry Wells; treasurer, T. E. Wales; secretary, W. J. Van Patten; auditor, Henry Greene; warden, V. G. Barbour.

Finance committee, T. E. Wales, Henry Greene, C. P. Smith.

The following appointments were made:

Superintendent, Dr. B. J. Andrews.

Attending physicians, Dr. H. R. Watkins, Dr. P. E. McSweeney, Dr. S. E. Maynard, Dr. W. R. Prime.

Attending surgeons, Dr. L. M. Bingham, Dr. J. B. Wheeler, Dr. D. C. Hawley, Dr. H. C. Tinkham.

Ophthalmologist and laryngologist, Dr. J. H. Woodward.

Consulting physicians, Dr. A. P. Grinnell of Burlington, Dr. L. F. Burdick, of Winooski, Dr. A. C. Bailey, of West Randolph, Dr. A. T. Arkley, of Essex Junction.

Consulting surgeons, Dr. Henry James, of Waterbury, Dr. A. M. Phelps, of New York city, Dr. W. B. Lund, of Burlington, Dr. William Platt, of Shoreham.

At the last meeting of the board of directors, Superintendent Andrews reported 60 patients now in the hospital. In the last two months 92 patients have been received, and 95 have been discharged.

The appointment of house surgeon has been conferred upon M. F. McGuire of this city. Capt. A. H. Appel, Surgeon U. S. A., Fort

Ethan Allen, was appointed pathologist, and Dr. M. C. Twitchell was appointed to fill Dr. J. H. Woodward's place during the latter's absence in Europe.

THE VERMONT STATE BOARD OF PHARMACY.

Pursuant to the laws enacted at the last Assembly, the Governor appointed the following Board of Pharmacy: A. W. Higgins of Rutland, F. W. Pierce of Chester, J. G. Bellrose of Burlington, Collins Blakely of Montpelier, and C. C. Bingham of St. Johnsbury.

The Board met for organization at Montpelier, January 1st. and 2nd., and elected officers as follows: A. W. Higgins, President, F. W. Pierce, Treasurer, and J. G. Bellrose, Secretary.

The next meeting for the examination of applicants will be held at St. Johnsbury, March 27th.

THE REAL VALUE OF THE MEDICINAL PEROXIDE OF HYDROGEN PREPARATIONS FOUND IN THE MARKET.

BY H. ENDEMANN, PH. D., CHEMIST.

Formerly with the Health Department of New York City.

My attention having repeatedly been called to several reports and analyses made by different chemists and published by some medical journals, I concluded to examine all the brands of preoxide of hydrogen which I could find on the market, in order to ascertain the real value of each when intended to be used as an antiseptic remedy, both internally and externally.

The reports on the subject which have come to my knowledge are quite contradictory, and my object is to impart to the medical profession the results of my experiments, which have been made on fourteen fresh samples, purchased by me in duplicate, directly from the manufacturers or their selling agents.

These brands have been tested for the volume of available oxygen, the amount of residue, the degree of acidity, and the amount of soluble baryta salts contained therein, as per following table:

BRANDS.

		Volume of Available Oxygen, determined by means of a solution containing 5.665 Grammness of Permanganate of Potash per liter of distilled water.	Residue obtained from 100 C. C. of Perox- ide of Hydrogen dried at 120 degrees C.	Acidity expressed in Cubic centimeters of Normal Volumetric Soda Solution for 100 C. C. of Peroxide.	Baryta found in Soluble Baryta Salts con- tained in 100 C. C. of Peroxide.
No. 1.	John Bene's Peroxide of Hydrogen Medic- inal.....	10.50	0.1886	2.19	None
No. 2.	Hydrozone.....	27.35	0.2180	3.11	None
No. 3.	Larkin & Sheffer's Peroxide of Hydrogen Medicinal.....	9.65	0.1206	6.75	None
No. 4.	Mallinckrodt's Peroxide of Hydrogen Me- dicinal.....	9.55	0.1408	1.43	None
No. 5.	Marchand's Peroxide of Hydrogen Medici- nal.....	16.55	0.564	1.29	None
No. 6.	McKesson & Robbins' Peroxide of Hydro- gen Medicinal.....	10.95	0.0540	0.44	None
No. 7.	Merck & Co.'s Peroxide of Hydrogen Me- dicinal.....	0.50	0.2418	4.57	None
No. 8.	Oakland Chemical Co.'s Peroxide of Hy- drogen Medicinal.....	10.50	0.0382	0.34	0.0017
No. 9.	Peuchot's Peroxide of Hydrogen Medici- nal.....	10.60	0.4674	1.77	0.0018
No. 10.	Powers & Weightman's Peroxide of Hy- drogen Medicinal.....	8.40	0.0830	2.03	None
No. 11.	Pyrozone, 3 per cent.....	11.20	0.0534	0.76	None
No. 12.	Rosengarten & Sons' Peroxide of Hydro- gen Medicinal.....	3.10	0.1002	0.25	None
No. 13.	Smith, Kline & French Co.'s Peroxide of Hydrogen Medicinal.....	6.15	0.0880	2.6	None
No. 14.	E. R. Squibb's Peroxide of Hydrogen Me- dicinal.....	12.40	1.004	12.04	None

By referring to this table it is easily understood that sample No. 2, "hydrozone," is far superior to any other brand which has ever been made, not only on account of its containing a much larger amount of available oxygen, but also owing to the presence of a small quantity of several essential oils, the respective nature of which could not be determined, very likely because they have been submitted to the oxidizing action of peroxide of hydrogen before being used to make "hydrozone."

I attribute to this small quantity of essential oils the great superiority of hydrozone over any other brands of H_2O_2 as a healing agent.

When hydrozone is diluted with distilled water, in the proportion of half and half, the resulting mixture contains about 13.5 volumes of available oxygen, and its bactericide power still remains the same as the bactericide power of sample No. 5, which contains 16.55 volumes of available oxygen.

Sample No. 14 comes next to sample No. 5, but it is readily seen that the degree of acidity is entirely too large for a preparation which is to be applied to the most sensitive diseased mucous membranes.

Sample No. 11, called "Pyrozone" which contains 11.20 volumes of available oxygen, is quite similar to sample No. 6, with the exception that the latter contains a small quantity of salicylic acid. Very likely the salicylic acid has for its object to increase the bactericide power.

Acidity.—The 14 brands which I have examined contain free acids (phosphoric, sulphuric, muriatic); and I must say that peroxide of hydrogen medicinal should never be made neutral before using, even in the most delicate cases. Neutral peroxide of hydrogen rapidly decomposes under all conditions of exposure.

The keeping properties of H_2O_2 solutions vary a great deal with the degree of purity and the percentage of free acids contained therein.

If the proportion of acid is too large, the profession well know that it acts as an irritant upon diseased surfaces. If it is too small, the solution don't keep well.

My opinion is, that a standard solution of medicinal H_2O_2 must answer the following tests :

1. It should contain at least 15 volumes of available oxygen.
2. The quantity of free acids contained in 100 cubic centimeters should require not less than 1 c. c. and not more than 3 c. c. of normal volumetric soda solution, to be made neutral. Such a small quantity of free acid is not objectionable.
3. It should not contain any soluble baryta salts.
4. It must be free from sediment.

It is to be noticed that the brands No. 7 and No. 12 are valueless.

The brands No. 8 and No. 9 are not fit for medicinal uses, owing to the fact that they contain traces of soluble baryta salts.

The brand No. 3 has a heavy sediment of sulphate of baryta, which may be considered inert towards the system, but it is certainly detrimental to the keeping qualities of this preparation.

Brand No. 14, which is sold as a ten volume solution, is really twelve volumes, but it is too acid. Brand No. 5, which is sold as a fifteen volume solution, is really 16.55 volumes, viz.: About ten per cent. above the standard.

The brand No. 2, which is sold without any mention of volume, is really a 27.35 volume solution, viz.: Ninety per cent above the standard.

None of the other brands come up to the standard, but on the contrary they run from 35 to 55 per cent. below.—*Times and Register*.

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Medical Sciences.*

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EDITORIAL.

THE RELATION OF THE PHYSICIAN TO THE LABORING CLASS.

The recent troubles between labor and capital in the West, which came so near terminating with gravest results to the country, have set the intellectual people of our land to thinking. Without any attempt at effect, it may safely be said, that to many it has been an awakening. The apparent indifference of those commonly called independent, has been due, not to coldness of heart, but to an utter ignorance of the real condition of the poorer laboring classes.

It takes a great crisis to bring people to realize that all lives are not patterned after their own. And so the "great strike" at Chicago, while the methods used at that time are by no means endorsed, has had its mission. It has brought the laboring man to the public gaze, as a being as utterly incapable of changing his condition, as the tiny fly in the spider's web, whose every struggle but adds to its doom.

Humanity, while many times dormant, is always present, and the knowledge of the actual condition of the working classes, alone was suffi-

cient to create an interest among the true men and women of the country "What can we do to better the condition of the working man and his family?" is the question of the hour.

Among the many, to whom the situation must certainly have appealed, are the physicians of our land.

From the standpoint of *Economy*, the practice of medicine is but a "means to the end," production, but, thank heavens, such is not always the case. There is no grander work in the world than the relieving the sick from pains that the flesh inherits. There is no other profession, partaking more thoroughly of true humanity. Is it not then the duty of the true physician to lend his energy to the noble course of bettering the laborer's condition? It most certainly is.

The effects of heredity and environment are too evident to be ignored, and no one can realize these terrible effects more truly than the wide-awake physician who comes in contact with them every day and who is ever looking to them for a primary cause.

It is far from probable that healthy children will come to the father or mother whose lives are spent in excessive toil day in and day out, and whose lives are a constant struggle to keep the "wolf from the door." Ah no, and if perchance, Nature should happen to smile on their progeny, the home surroundings will not fail to stamp their mark upon the helpless children. And so it goes on, each generation showing the the traces of the former and stowing up its share of human misery to hand down to the next.

Does the physician ask, "What can I do?" Do! He can cry out against the abuse of nature. He can say what he knows to be true, that for a man to work twelve hours a day and more, is a crime for those who hire him; that, the sanitary conditions of many tenement quarters should not be tolerated by the State; and that for a child under sixteen years of age to be obliged to work from morning until night in the foul shops of the larger cities is a curse to this country!!

Just stand at the exit of a large factory in some city and watch the people who come pouring out at six o'clock. In the expressions of all from the youngest to the oldest, with few exceptions there is a pitiful absence of hope. It has been crushed out by the ceaseless routine of their lives. Winter mornings before daylight they are toiling away, and they do not stop until long after the sun has gone down.

Is it right? In the name of humanity, no! It is wrong, cruelly

wrong to make a man, woman or child work more than eight hours a day !

After they have come out let us follow them home. And is this filthy place, this cold damp hole, home? God forbid that the sacred name should be applied to such a place ! Humble a home may be, but a death trap never ! And what else can we call the basements and tenements in which so many of the factory people live? Go into one and notice the ventilation, the sanitary conditions, and the number of people occupying it, and then wonder if it is healthy. The case is actually known where *eleven* people, the youngest nine years old, ate, slept and existed in a room less than twenty foot square ! Was not this a case for the law to take hold of, considering the danger from disease and the favorable conditions for its propagation? And no doubt there are hundreds of other like conditions.

There must be a change, and it must come soon. The situation calls for wise action from thinking men and women, and who should be nearer the front than the progressive physician? Just as it is his mission to cure, so should it be his duty to prevent.

And he will not be found wanting, for the history of the profession is one of noble action, and the future annals will record greater sacrifices and greater deeds than the past has ever known.

For nearly thirty years the regular pharmacists of Vermont have been striving to get efficient laws of pharmacy, in order to protect themselves and the public from gross carelessness and incompetency on the part of those who are incapable of dispensing drugs.

It will be exceedingly gratifying to the physicians in Vermont to know that their efforts have been crowned with success.

In the second copy of the Atlantic Medical Weekly, a medical publication as new as our own monthly, we note that the following appears in an editorial on medical laws, "Rhode Island is now, with Maine, New Hampshire and Vermont, among the few states in the Union with no medical laws."

We wish to correct this statement, and if the editor will examine Chapter 172, Revised Laws, 1880, designated, "practice of medicine and surgery," he will see that the Vermont law is the most rigid one, outside of Connecticut, in New England.

MEDICAL ABSTRACTS.

THE PHYSIOLOGICAL ACTION OF BROMIDE OF ETHYL.—The studies of Dastre have proven that bromide of ethyl is adapted for use in the human subject. Narcosis by this drug is similar to that of chloroform. Both act on the brain, then on the medulla, and lastly on the bulb. Chloroform chemically irritates each centre before it paralyzes them; bromide of ethyl acts directly, there being consequently no excitement and no laryngeal reflex to be feared. Still more, it is a vaso-dilator; it produces congestion of the head, and thus no syncope is to be feared; at the same time, this permits of the sitting posture of the patient, so necessary in certain operations on the throat.—*Dr. C. G. Cumston in Boston Medical and Surgical Journal.*

BACTERIOLOGICAL DIAGNOSIS.—How can we make a certain diagnosis of diphtheria by bacteriological examination when it is well known that the Klebs-Loeffler bacillus is as apt to be found in the healthy throat as in one suffering from diphtheria?—*The Medical Brief.*

CHORDEE.—Dr. W. P. Carr of Washington, D. C., states ("Med. Bull.") that chordee may be promptly relieved by putting on a condom containing 2 or 3 drams of a 2 per cent. carbolic acid solution and that any pain in the penile portion of the urethra or pendulous penis may be controlled in this way.

Dr. N. F. Howard, in a case of extensive and painful burns of the hands, obtained almost instant relief by immersing them in a solution of one pound of Epsom salt in two quarts of water for one hour. A dressing of lime water and oil was applied and the raw parts covered with oxide of zinc.—*Atlanta Med. and Surg. Journal.*

ASAFETIDA FOR INSOMNIA.—Asafetida is a valuable remedy in the insomnia occurring in the aged. A five-grain pill exhibited after supper and repeated at bed-time will often bring refreshing sleep. In mild delirium, and especially during the period of unrest that precedes an attack of delirium tremens, the injection, by the rectum, of two ounces of the mixture of asafetida, will, in many cases, produce the much-needed sleep, without recourse to the more dangerous narcotics.—*Louisville Medical Monthly.*

FOR CLEARING PREPARATION FOR THE MICROSCOPE.—Lenz recommends the use of a solution of sodium salicylate for clearing preparations for the microscope. This body has great advantages over chloral, as it very quickly transforms starch granules into a transparent jelly, which is not disturbed by the addition of glycerine or water, and still turns blue with iodine. Further, it has less detrimental effects on the ordinary tissues than chloral.—*The Druggists Circular*.

THE FUTURE OF ANTI-TOXINES.—If the anti-toxine treatment of diphtheria proves successful, there is no apparent reason why other infectious diseases can not be cured in the same way, and the experiments which have already been made, not only in cases of tetanus, but in cases of pneumonia and typhoid fever as well, although as yet few and not convincing, give promise of a bright future in this department of therapeutics.—*Dr. Henry Hun in the N. Y. Med. and Surg. Journal*.

Netter of Germany, says:—"Pneumonia is a contagious, transmissible disease. The contagion is due to a specific pathological micro-organism which multiplies in the disease focus."—*American Medico-Surgical Journal*.

MALTINE WITH COCA WINE IN THE TREATMENT OF DISEASES OF THE AIR PASSAGES.

BY T. STEVENSON, M. D., NEW YORK.

Some months ago my attention was called to the new combination, maltine with coca wine, and it occurred to me that a coca wine having also food value and containing a digestive ferment, the diastase of the maltine would be of especial advantage in treating the condition of mal-nutrition and debility, so common in diseases of the nose, throat and lungs. I determined to give it a careful trial, not only in my private practice, but at the Bloomingdale Clinic.

I have been more than gratified with the result and have been impressed with one fact more than any other, and that is that the patients invariable volunteer the statement that they are "feeling better" soon after they begin to take the preparation. Whatever may be our views in regard to the diagnosis, prognosis and pathology of any given case which is under our care, it is surely always important that we do our best to relieve the unpleasant symptoms of the patient, as that is what he seeks our aid for more than anything else.

I append some brief notes of a few cases which illustrate the good results secured by adding maltine with coca wine to whatever local or constitutional treatment the case appeared to need.

Mrs. B—, aged 35, indigestion and nervous prostration; bronchitis. One ounce maltine with coca wine at meals, and at bed time. The indigestion improved promptly; she began to relish her food, could sleep, and ceased to complain of her nervous symptoms. The result was satisfactory in every respect.

Mr. S—, aged 25, phthisis, chronic malaria and mal-nutrition. He had recently been exposed in a malarial district in the South, and his mental depression was so great that it almost amounted to melancholia. I put him on Warburgh's Tincture for the malaria, and gave him an ounce of maltine with coca wine at each meal and at bed time. The mental depression was very much lessened immediately, and all of the symptoms were promptly relieved. He said he could breathe much better, and it was apparent to an observer that the symptoms of "air hunger" were mitigated. This was undoubtedly due to the peculiar effect of the coca.

Miss H—, aged 16; chlorosis and atrophic nasal catarrh. She was put upon the tincture of iron, also local treatment for the catarrhal condition, and maltine with coca wine, as in the above-mentioned cases. All the symptoms improved at once, and she felt very much relieved.

Miss H—, aged 18; anemia, with relaxed vocal cords. She is a public singer, and had been forced to abandon her occupation. I put her on iron and maltine with coca wine. In a few days the symptoms were all improved, the aphonia was entirely relieved, and she was enabled to return to her professional work. The prompt relief of the aphonia was doubtless due to the coca acting as a tensor to the vocal cords. She is in a very enthusiastic frame of mind over the effect of the treatment, and is very grateful for the relief afforded.

Mrs. S—, aged 58; phthisis. Was unable to take cod liver oil; was very much reduced in strength, and could not assimilate enough nourishment to sustain the vital powers. At the beginning of the treatment she weighed 95 pounds; after taking maltine with coca wine at each meal and at bed time for four weeks, her weight has increased to 112 pounds. She can now eat and sleep well, and is feeling very comfortable.

No. 2074 Fifth avenue.

Times & Register.

NEWS, NOTES AND FORMULA.

The following officers were elected at the recent meeting of the American Chemical society held in Boylston Hall, Harvard University, Boston: President—Prof. Edgar F. Smith, of Philadelphia; General Secretary—Dr. Albert C. Hale, of Brooklyn; Treasurer—C. F. McKenna, of New York; Librarian—F. E. Dodge, of Brooklyn; Directors—H. W. Wiley, William McMurtrie, J. H. Appleton, A. A. Breneman; Members of the Council—F. W. Clarke, E. R. Squibb, W. L. Dudley, G. F. Barker.

Interesting papers were read by Dr. H. W. Wiley, Dr. C. B. Dudley, and Professors A. H. Galvin, Edward Hart and E. W. Mosley. All-in-all the meeting was a very successful one.

SCIATICA.—Dr. Metcalf orders :

R. Tinct. aconit.,
Tinct. colch. sem.,
Tinct. bellad.,
Tinct. actæa racem., aa parts equal.

M. Sig. Six drops every six hours.—*Med. and Surg. Reporter.*

SALACTOL.—A preparation consisting of the sodium salts of salicylic and lactic acids has been introduced under this name, and when dissolved in a 1 per cent. solution of hydrogen peroxide is recommended as a local application to the throat in diphtheria.—*The Druggist's Circular.*

PROSTATITIS.

R. Liq. potassæ, 0 ii-iv.
Ext. hyoseyami, 0 i-iv.
Syr. aurantii cort.
Aq. cinnamomi, aa 0 iiij.

M. Sig. A tablespoonful in a wineglassful of water every eight hours.—*Exc.*

CHRONIC CYSTITIS.—Mr. Martin Chevers writes to the *Medical Press* that in a troublesome case he witnessed prompt relief from the use of a combination as follows :

R. Tinct. collinsoniæ, 0 ij.
Copaibæ, 0 iiij.
Liq. morph., 0 ss.
Liq. potassæ, 0 ss.
Ol. menth. pip., m iiij.
Aq. camph., ad 0 vj.

Sig. One tablespoonful every three hours.—*Med. Bulletin.*

The Burlington Y. M. C. A. is having a series of "Medical Talks" to young men, which have become very popular. The lectures are exceedingly interesting and should be productive of much good to those who attend, as many as three

hundred young men being present at some of these talks. Surely medicine is growing in popular favor.

Dr. Kingsett, the chemist, holds that, since ozone is produced by trees of the balsam family, the pine, fir, larch and eucalyptus should be planted freely in and about cities and towns.

Biniiodide of Mercury is recommended as an antiseptic in obstetrical and surgical practice.

The latest hygienic craze in Paris is the use of porous glass for windows. This is declared to possess all the advantages of the ordinary window framing, and, while light is as freely admitted as through the medium of common glass, the "porous" further admits air too, the minute holes with which this is intersected being too fine to permit of any draught, while they provide a healthy continuous ventilation through the apartment.

BOOK REVIEWS.

A synopsis of the Practice of Medicine. By William Blair Stewart, A. M., M. D., Lecturer on Therapeutics, in the Medico-Chirurgical College of Philadelphia. etc.—New York: E. B. Treat, 1894. pp. 433. Cloth, \$2.75.

This book is without doubt the best *condensed* work on practice that has been published during the last few years. It can scarcely be recommended for the use of medical students, for it does not go into detail enough, but for the busy practitioner desiring to refresh a point he once knew, it is just the book.

The pathology is exceedingly good and the various treatments, while general, are practical and efficient. As a whole it is a valuable work and though we may take issue with the author in regard to some of his assertions, we cannot but admire his systematic knowledge as shown by his book.

Sexual Neurasthenia, Its Hygiene, Causes, Symptoms and Treatment, by Geo. M. Beard, A. M., M. D., and edited with notes by A. D. Rockwell, A. M., M. D., E. B. Treat: New York. 1894. Cloth, \$2.75.

In this country the subject of sexual exhaustion is rapidly becoming of great importance. It should be thoroughly understood by the general practitioner, for its many phases, conditions and complications are met with daily.

The statement is absolutely true that the Americans of to-day are a people who go to excess in everything. And so we find as a most important result of special excesses (sexual) a neurasthenic or exhausted condition of the sexual¹ powers, generally complicated with grave symptoms of a nervous type. Such cases are often hard to treat for reasons well known by physicians.

The above work by Dr. Beard is certainly a very valuable one, for it is the product of a vast experience in the special line of sexual neurasthenia. He reports faithfully a large number of cases and in subsequent chapters gives the various treatments, diets, etc. The book is well edited and presents a fine appearance. It will surely meet with much favor.

Notes on the Sanitary Condition of Mexico. By G. P. Conn, M. D., Concord, N. H. (A reprint from the translations of the New Hampshire Medical Society.)

A most interesting article on Sanitation in an adjacent country. It is finely written and the many beautiful cuts add greatly to its interest.

PUBLISHER'S DEPARTMENT.

All necessary materials for work in Histology, Pathology, etc., may be found at J. W. O'Sullivan's, on Church St., Burlington, Vt.

Medical students should call and see the full line of surgical instruments, etc., kept by R. B. Stearns & Co., before buying. This reliable firm carry a fine stock and their prices are far below their competitors.

Considerable interest is being evinced by physicians regarding the tonic stimulant action of Kola, and it is coming to be largely used in cases of nervous exhaustion, as it combines the invigorating properties of caffeine, with the stimulating effects of Theobromine and Kolanine, which latter peculiar principle is claimed by some investigators to be superior to cocaine as a stimulant, without the enslaving properties of the latter alkaloid. Kola in the form of a fluid extract is acid and bitter in taste, which renders it unpleasant to administer, and manufacturing pharmacists have devised many compounds and elixirs as well as combinations with other drugs, without being able to present a palatable preparation. After long study, and experimental investigation, Frederick Stearns & Co., of Detroit, Mich., by an original process have at last produced such a preparation—Stearns' Kola Cordial—that is freed from acid bitterness. It is one-fourth the strength of the fluid extract, and is in the form of a delicious cordial, being the only palatable preparation of the drug pure and simple that has been devised.

Messrs. F. Stearns & Co. were the introducers of Kola to the medical and pharmaceutical professions of this country, and refer inquiries to the "New Idea"

of April, 1881 and June, 1883, where the drug was first mentioned. They have published an exhaustive treatise on Kola, its history and therapeutic range, which is ready for distribution to physicians who are interested in the subject, and they invite correspondence regarding the drug itself, and Stearns' Kola Cordial, samples of which, with full descriptive literature will be mailed on request. Write them.

CLINICAL EXPERIENCES WITH SOLUTIONS OF PYROZONE.

Dr. Frank L. Shattuck, of the Detroit College of Medicine, says: "Having used all of your preparations of pyrozone quite extensively, I can vouch for its merit, consequently it will not be necessary to reiterate what has already been said.

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As pyrozone, after its decomposition, leaves no material in the system which is foreign, it is, therefore, the most efficient and harmless disinfectant or prophylactic that can be used, in all forms of purulent inflammation.

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I might add that in all the several applications of pyrozone heat will only render its power more effective."

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WEST HACKNEY, LONDON, WRITES, ON JAN. 17, 1893:

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Yours most gratefully,

JOHN ALMON.

A letter from Mr. Almon in January, 1893, states he has had no return of the disease.

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"Kola should accordingly be employed as a diuretic in heart disease, and especially in conditions of feeble heart; in neuralgias; in severe fevers of adynamic character and during the period of convalescence after the latter; in exhausting diseases; in dyspepsias; chronic and obstinate diarrhoeas; in cholera; and finally, as an excitant and exhilarant in cases of mental depression."

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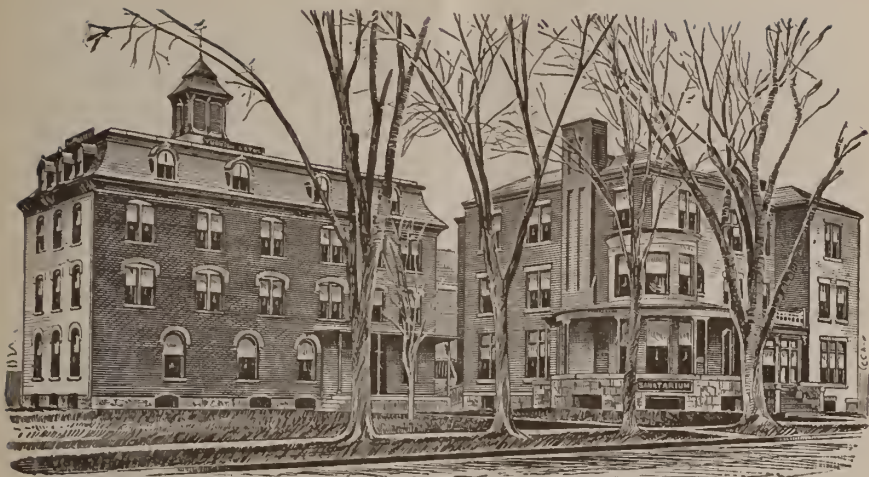
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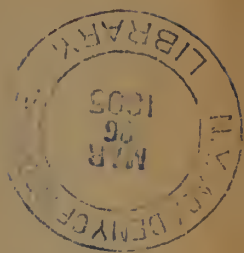
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The Vermont Medical Monthly,

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VOL. I.

MARCH, 1895.

NO. 3.

(Original Papers)

TUBERCULOSIS IN THE LOWER ANIMALS AND ITS RELATION TO PUBLIC HEALTH.

By FRANK A. RICH, V. S., M. D., Burlington, Vt.

Read before the Vermont State Medical Society, Oct. 8, 1894.

(Concluded.)

There are on record a great many well authenticated cases of accidental infection of human beings by the products of tuberculous animals. The following are some that have come to my notice, most of which appear in our bulletin 42, recently issued.

Dr. Anderson, of Seeland, reports a case of a babe fed on the milk of a cow having tuberculosis of the udder. The child died at six months with tuberculosis. The mother also developed symptoms of the disease after the child's birth. It was considered that both contracted the disease from the cow's milk.

Ollivier, at a meeting of the Academie de Medicine of Paris, stated that a patient of his, a young woman twenty years old, of vigorous health and without constitutional trouble, had acute tubercular meningitis. She had been educated at a boarding school where thirteen pupils had been ill of and six had died of tuberculosis within a few months. The milk supplied to the school was from cows kept on the place. Upon examination these animals were found to have tubercular ulcers on their udders, and, after being slaughtered, were found to be generally tuberculous.

A Scotch family, all of sturdy health, had a herd of cattle which developed tuberculosis. Two daughters, being young, were brought up on the milk. Their two older brothers were more fond of whiskey than

of milk. They are living, healthy and hearty, while their two sisters are lying in their graves, victims of tuberculosis.

In the practice of Dr. Stang of Amorback, a well-developed five-year-old boy, from sound parents, whose ancestors on both sides were free from hereditary taint, succumbed, after a few weeks illness, with acute miliary tuberculosis of the lungs and enormously enlarged mesenteric glands. A short time before the parents had their family cow killed and found her the victim of advanced pulmonary tuberculosis.

Dr. Demme records the cases of four infants in the Child's Hospital at Berne, the issue of sound parents, without any tuberculous ancestry, that died of intestinal and mesenteric tuberculosis as the result of feeding on the unsterilized milk of tuberculous cows. They were the only cases in which he was able to exclude the possibility of other causes for the disease, but in these he was satisfied that the milk was alone to blame.

The infant son of a college mate of one of us, a comparatively strong and healthy child of twenty-one months, visited his uncle for a week. While there he drank the unsterilized milk of a cow which was soon after condemned and killed in a state of generalized tuberculosis. A few weeks after his return the child began to fail, and died three month after the fatal visit, a mere skeleton, with *tabes mesenterica*, or consumption of the bowels. A second child brought up on sterilized milk is in robust health. Both parents are in excellent health.

A child four years old, great grandson of Henry Ward Beecher, died last March at Yonkers, N. Y., of tubercular meningitis. The diagnosis was confirmed by specialists. There were no hereditary tendencies to the disease known. The certainty that he had the disease, and the inability to account for it from human agencies led the physicians to suspect the milk of two Alderney cows on which the child had been mainly fed. Both the tuberculin test and the post-mortems showed that both animals were tuberculous. Through the kindness of Dr. J. S. Lamkin of Yonkers, who made both tests and post-mortems, sections of the lungs and a gland were sent to us. They were found to be highly tuberculous.

May 30, '79, a cow died of generalized tuberculosis in Providence R. I., the lungs, most of the abdominal viscera, muscular tissue and udder being tuberculous. The milk had been used in the family. In August the baby was taken sick and died in seven weeks of tubercular meningitis. Post-mortem showed tubercular deposits in the meninges

of the brain and some in the lungs. Two years later a two-year-old child in the same family died of tubercular bronchitis, and seven years later a nine-year-old boy, "delicate" for years, died of "quick" consumption. So far as known the family on both sides were rugged and healthy.

Dr. H. M. Pond reports four cases of tuberculosis in one family, of which three were fatal. He considered the milk of their cows to be the source of the disease, since those animals were apparently tuberculous.

In the spring of 1890, Dr. Gage, city physician of Lowell, Mass., had as a patient an infant which died of tubercular meningitis. Its parents were healthy and surroundings good. It had never been fed anything but the milk of a single cow. The cow's milk was microscopically examined and found to contain the bacilli of tuberculosis. Guinea pigs inoculated with her milk developed the disease. A second child, fed upon the same milk, was developing similar symptoms to those discovered in the child that died. Dr. Gage could find no way to prevent the sale of the milk unless he bought and paid for the cow out of his own pocket. So far as he knew she was still being used for a milk supply a year later.

The following cases of infection from eating meat, or direct inoculation, may be cited: A woman whose ancestors were without tuberculous taint ate eleven chickens bought from a neighbor. These chickens had been in the habit of greedily eating the spittle of their consumptive owner. They were but slightly roasted before eaten. The woman soon developed a well-marked case of tuberculosis of the bowels.

Dr. Treon describes the poor, emaciated, diseased animals furnished to the tribes or Northwestern Indians; how they eat the liver, tallow and entrails, raw and fresh, and how the carcass is dried, pounded and packed in skins to be eaten later, uncooked, even though the animal died of disease. The Indian mortality from consumption is 50 per cent of all deaths at several points; while at Crow Creek, Dakota, 50 out of the total Indian population of 1200 die yearly of consumption and scrofula.

Dr. Washington Matthews spent twenty-one years among the Indians. He states that their food is the primary cause of disease among them, and that when the supply of fresh beef is liberal the consumption death rate is highest.

Tscherming attended a veterinarian who cut his finger during a

post-mortem on a tuberculous cow. An ulcerated swelling formed, which on removal proved to be tuberculous and contained the characteristic bacilli.

Law reports a case in his personal experience precisely parallel with Tscherming's.

Pfeiffer attended a veterinarian of good constitution, without hereditary predisposition, who cut his right thumb deeply during a post-mortem on a tuberculous cow. The wound healed, but remained swollen. A year later pulmonary tuberculosis had developed, and in two and a half years after the wound the man died. Post-mortem examination showed tuberculosis of the joint of the wounded thumb and of the lungs.

Dr. Ernst sent a letter of inquiry to about 2000 medical men and veterinarians of the highest standing. "Out of 1200 or 1300 answers received, but two expressed an absolute disbelief in milk as a vehicle for the virus of tuberculosis; there were a large number who expressed their belief in it; a large number who stated, what is perfectly true, the difficulty of proving such a thing, but expressed their belief in it; and some described cases which they believed were distinctly traceable to the milk coming from tuberculous cows.

I have records of cases of probable infection of children from the milk of mothers with tuberculosis of the lungs and mamma. I have cases of the infection of children from milk coming from tuberculous cows. I have a large number of cases from veterinarians showing the infection of calves from tuberculous cows; and it seems to me that the amount of evidence from the clinical side is very great."

Dr. E. O. Shakespeare, Ex-U. S. Cholera Commissioner, says: "With all its terrors, it (cholera) is not nearly so deadly as is tuberculosis," and "It has been found that in infants and young children in some large cities the mortality from some form of tuberculosis is far greater than is generally believed, amounting in some localities to one-fifth of the deaths of the young. The significant fact in this connection is that it is most frequently some part of the digestive passages that became first affected."

CASE I. Mrs. R., aged 20, using milk from a tuberculous cow, developed symptoms of pulmonary tuberculosis. The cow was exchanged for another, and the young lady apparently recovered. Three years later she suffered from malaria, and became reduced in flesh and strength. She then went to live where the above mentioned

tuberculosis cow was still owned and milked. Following the advice of her physician, she adopted a milk diet, and in a short time developed acute miliary tuberculosis, from which she died. The cow died a month later, and the autopsy revealed general tuberculosis.

CASE II. Mr. D., young man, died of pulmonary tuberculosis. Two years later I tested the family herd and found over 80 per cent of it tuberculous. It is known that Mr. D. was very fond of milk and used a great deal.

CASE III. Mr. C., a young man of healthy parents, died of tuberculosis. Three years later I tested cows from which he had used milk. I destroyed over three-fourths of them, all of which were tuberculous, and many of them proved to be general.

Parents of the last three mentioned cases are all living, and they give no family history of the disease.

CASE IV. Mr. T., cut his finger on a specula of bone while making post-mortems on tuberculous cows. A few months later he developed a tuberculous joint.

Tubercles and tubercle bacilli are present in muscles of beef in only a small percentage of cases, but are often present in the small lymphatic glands of the intermuscular areolar tissue. These are included in steaks and roasts.

In tuberculous pork the danger is far greater, for tubercles appear not only in the lymphatic glands but in the muscle itself. The livers of both cattle and hogs, so commonly eaten now-a-days, are tuberculous in a very large number of cases. These glands are often completely filled with miliary tubercles, yet to the naked eye appear normal, being detected only by microscopical examination or careful inspection of the portal lymphatics.

Milk is more to be dreaded than meat because the udder of the cow is often the seat of tuberculosis. Twenty-two per cent of the tuberculous cows destroyed in Vermont during the past eight months had tuberculosis of the udder, as revealed by post-mortem examination. In some herds from fifty to seventy-five per cent had tuberculosis of mammeæ and associated lymphatic glands. Even in the absence of tuberculosis of the udder the milk is sometimes infectious. Koch and Nocard failed to infect animals with milk from cows with apparently sound udders. On the other hand, Bang, Airschberger, Ernst and Peters, Smith, Kilburn and Law all succeeded in infecting animals with milk of tuberculous cows whose udders were perfectly sound.

Prof. Bang of Copenhagen successfully inoculated animals with milk from 9 out of 63 cows selected for their sound udders.

The conclusions drawn by Drs. Ernst and Peters of Boston, who carried out most carefully a long series of experiments with the milk of tuberculous cows, are :

“1st. And emphatically, that the milk from cows affected with tuberculosis in any part of the body may contain the virus of the disease.

2d. That the virus is present whether there is disease of the udder or not.

3d. That there is no ground for the assertion that there must be a lesion of the udder before the milk can contain the infection of tuberculosis.

4th. That, on the contrary, the bacilli of tuberculosis are present and active in a very large proportion of cases in the milk of cows affected with tuberculosis but with no discoverable lesion of the udder.”

It seems to be quite generally believed that the ordinary cooking of meat renders it entirely innoxious. But the interior of rare steaks and roasts is not heated sufficiently to destroy tubercle bacilli. In a few instances successful inoculations upon small animals have been made with thoroughly cooked tuberculous material. Practically, however, boiling for half an hour destroys all germ life, and “well-done” meat will not infect. There is another feature in the case which has been largely overlooked in the past : the life products of the bacteria, or ptomaines, are not rendered inert by heat, so there still remains the possibility of septic intoxication. The same is true of milk sterilization. Boiling for half an hour practically destroys germ life, but these bacteria proteines derived from the bodies of tubercle bacilli, and which form the basis of Koch’s lymph or tuberculin, not only withstand heat but are probably made the more available by its action. So, alike in sterilized tuberculous meat and milk there remain chemical bacterial products, which though only slightly toxic for healthy persons are highly so for tuberculous human beings and animals, producing remarkable reactions and modifications of tuberculous lesions. It was these microproteines which Robert Koch hoped to prove of inestimable therapeutic value in the treatment of tuberculosis. It is they which give to tuberculin its peculiar value as a diagnostic agent. In both, its action is almost invariably in and about tuberculous areas, producing there positive chemitoxis, renewed or increased activity of the disease pro-

cess, with new extension, and frequently converting a chronic or latent tuberculosis into an acute and rapidly fatal type of the disease. This is true of the effect of tuberculin on all animals, but man is manifestly more susceptible to the poison than most lower animals. He is many times more susceptible than even the guinea pig. These microproteines, being generally diffused throughout the body of a tuberculous subject, exist in its products; and those consuming such products, even though they are sterilized, are taking small doses of tuberculin, and if they are already tuberculous the effect may be to aggravate and extend the disease.

Mortality statistics show that 14 per cent. of all deaths result from tuberculosis. Who dares to attempt to estimate the number we should add to this to cover the many cases cured by treatment, change of climate, etc., and the thousands of cases of localized tubercle, as lupus, scrofuloderma and anatomical tubercle, dying at last from other causes; and the many thousands more of such localized cases as tubercular cervical and other lymphatic glands, osteomyelitis, white swelling, hip-joint disease, fistula in ano and many others cured by timely surgical interference. Who dares attempt to estimate the sum total, when all these are added to the almost incredible number who actually die from tuberculosis? Yet the least of them do require the presence of the tubercle infection just as certainly as does the case which dies from acute miliary tuberculosis or acute pulmonary phthisis. Thus it would seem that the human system is equally, if not more, susceptible to the invasion of this infection than that of any of the lower animals. In this and many other countries cows' milk and its products enter more or less into the constant diet of nearly every family, while many individuals, by reason of disease or tender age, subsist for the most part upon it.

Mothers of strumous diathesis or otherwise delicate health will refrain from nursing their children, and physicians uphold them in so doing, yet tuberculosis of the human mammary gland is so extremely rare that Dr. Hubermaas was able to collect records of only eight cases, while in the bovine tribe it is as conspicuous for its frequency of occurrence, and nearly every milkman peddles its fruits. Again it is routine practice to place patients upon milk diet during the course of, and convalescence from, nearly all diseases when by reason of lowered vitality they are temporarily predisposed to tuberculosis, thus combining the most favorable conditions for the implantation of this active germ.

Cattle contract tuberculosis one from another, and sometimes from

a phthisical attendant expectorating on the stable floors, the dust of which is inhaled as well as taken with the animal's food.

Swine receive the infection through milk from tuberculous cows, from eating tuberculous carcasses and viscera, as well as from each other.

Fowls are infected by eating tuberculous milk and its products, picking up grain from the droppings of tuberculosis cattle and pigs, from each other, and from sputa of consumptives carelessly expectorated about yards, barns, etc., which is so greedily devoured by poultry.

The sources by which man is infected is a consummation of all these, with many more, for the beef, pork, fowl, milk, butter, cheese, and the diseased viscera, as the liver, kidneys, etc., do form the principal articles of his diet. He eats them, he assimilates them and he becomes infected by them.

Milk is probably the greatest disseminator of tuberculosis of all of the above mentioned mediums. This inference is well supported by the showing that the disease in all its forms is relatively much less prevalent in those countries where there are few or no cattle, as Hebrides, Iceland, Newfoundland, Algiers, interior South Africa, parts of Ecuador and Peru, and islands of the Pacific; where they are only kept for beef, as in Eastern Peru, or for manure, as in parts of Russia; where milk of reindeer is used instead, as in northern Norway, Sweden, Finland, Lapland and Greenland, and where goats and mares furnish the milk, as on the Kirghes Steppes.

While there is a pretence at inspection at our great packing centers, there is little if any elsewhere in this country. Our home dressed beef consists principally of old, worn-out, gargety or sterile cows, an alarmingly large percentage of which are tuberculous.

The hind quarters will usually pass detection, which together with such fore quarters as can be trimmed up and made passable are sold in our markets. Some parts that will not bear passing scrutiny in the market are converted into sausage or canned, while such as are too far gone for this are, together with all the diseased viscera and other slaughter house refuse, fed to a drove of hogs kept for that purpose, which in turn contract tuberculosis, are slaughtered and sold in our markets; thus little infection fails to reach some unfortunate home.

How can the physician hope to meet with any degree of success in the treatment of the various forms of tuberculosis when his patients are constantly taking the infection into their system, to say nothing of the

continued accessions of tuberculin (equivalent to Koch's treatment) which, after so thorough and extensive trial, costing the lives of thousands, had to be abandoned? Yet this is just what is taking place today in every town in the State of Vermont. Three millions die annually of tuberculosis, and it has headed mortality statistics for years, yet is looked upon as something inevitable, while a single case of small pox or cholera creates the greatest alarm.

It has been well said that "if the 5490 deaths from tuberculosis which occur every year in the city of New York could be brought together in an epidemic lasting but one week, no small pox, cholera or yellow fever scare would approach the panic which would thus be created. If we take the whole civilized world and compare with the tuberculosis mortality all the accumulated deaths from war, famine, plague, cholera, yellow fever and small pox, the latter are comparatively very insignificant."

It would be impossible in a paper of this character to discuss at length the measures necessary or feasible for the prevention or amelioration of this alarming source of danger to public health, so I shall only briefly allude to what I consider to be the proper course to take in the matter. With the enactment and enforcement of measures in keeping with the facilities at hand, I believe that the danger from this source might be reduced to a minimum, for in the tuberculin test we possess a thoroughly reliable means of diagnosis of tuberculosis in all animals. To make it available, three things are necessary: suitable legislation, adequate appropriations, and skillful and careful men to make its application.

Furthermore, there should be provision for the prompt destruction of all animals found to be tuberculous, and thorough disinfection of all buildings and utensils. This question involves a mass of such details as organization for action, reimbursement of stock owners, etc., not within the scope of this paper, but subject to the careful consideration of sanitarians and legislators.

In addition, every municipality should be provided with a public abattoir, where all animals slaughtered for the home market must be subject to the inspection of a competent veterinarian; such inspection extending to all viscera as well as to the carcasses. No canned meat or meat shipped from other points, as our great packing centers, should be allowed to be sold in the markets of such municipalities, unless pre-

viously inspected by skillful and reliable examiners, and certificates furnished to that effect.

In conclusion, I entreat you, as practitioners of medicine, in the management of all your cases of tuberculosis to see to it that fuel is not constantly added to the flame by accessions of the infection and poisonous ptomaines.

I furthermore ask you, as citizens, as physicians and as conservators of public health, to lend your influence to encourage further investigation of this matter, and legislation, if needs be, whereby we shall be less exposed to this most dreaded disease.

EXPLORATORY INCISION OF THE SCALP IN CASES OF HEAD INJURY.

By SAM SPARHAWK, A. B., M. D., PHILADELPHIA, PA.

In the experience of the general practitioner cases of serious head injury must, of necessity, be rare, but the fact that the exceptional case often involves the life of the patient, as well as the reputation of the physician, renders it imperative that a diagnosis be made early.

Conservatism in head injuries is not the surgery of to-day, and nearly all surgeons agree on the advantage of an early operation, thereby lessening the mortality.

Even the treatment of scalp wounds has undergone a radical change, so that now it is the custom to enlarge and deepen these wounds and examine the skull for depression or fracture before suturing, in order to eliminate doubt so far as possible; and yet, after all these precautions, some cases of fracture escape notice which can only be detected by careful observation for some time afterwards.

The text-book picture of skull fractures with the symptoms; loss of consciousness, excitability or depression of function, hemorrhage from the ears, nose or mouth, dilated or unequal pupils and vomiting, render a diagnosis simple enough and the treatment well outlined. Any or all of the preceding symptoms may be absent and still a fracture exist; seldom are they all present, less often are they entirely wanting, and it is in these doubtful cases that the exploratory incision is the only sure method of diagnosis.

The operation in itself, is hardly more than the taking of an anæsthetic, but involves a thorough knowledge of antiseptic technique in order to secure the best results and avoid the horrible sequellæ of septic infection, which, owing to the anatomy of the parts, is prone to spread rapidly to all tissues of the head and face. This condition, however, can only result from neglect or gross ignorance of wound treatment, but a few hours, and particularly where there is a fracture of the skull, are sufficient to render it a most serious complication.

When is an exploratory incision indicated? When there is a suspicion of an injury to the skull or its contents.

The following cases I observed while associated with Dr. W. B. Van Lennep in hospital and private practice :

J. S.—aged 27 years. A marine, while intoxicated, attempted to board a moving trolley car, and was thrown to the pavement. When brought to the hospital, late at night, he showed considerable mental depression, (shock and alcoholism?), and vomited several times.

A small transverse lacerated wound of the scalp was found about one inch posterior to the right parietal eminence. This was thoroughly cleansed, irrigated with Bi-chloride of Mercury solution, packed with iodoform gauze and the patient placed in the "Accident Ward." In the morning he was rational and complained of some nausea and slight headache, having a temperature of $100\frac{6}{10}^{\circ}$ and a little mental dullness. Here we have no positive symptoms of skull or brain injury. The disturbed stomach and headache may be due to alcohol, and considering his social status, the mental condition may be normal. But we would expect a normal or subnormal temperature in the reaction of acute alcoholism, while here it is elevated more than two degrees.

Now consider that the man was thrown on the pavement with considerable force, and when in only partial control of his members, and you can readily imagine, that serious injury might result.

It was decided to explore the skull. The patient etherized, the posterior part of the scalp was shaved and scrubbed, first with soap and water, followed by carbolic solution 1-20, and irrigated with Bi-chloride of Mercury 1-2000. An incision was made directly backward from the original wound, some four inches in length and the tissue elevated. This opening revealed a fissured fracture in the occipital bone extending downward as far as could be seen. With the trephine a $\frac{3}{4}$ -inch button was removed just above the lateral sinus, disclosing a comminution of the internal table, and the opening enlarged to the left nearly to the

median line. A considerable extra-dural clot was scraped out and the wound irrigated with Bi-chloride solution. The vessels were ligated with a stitch suture of cat-gut, a drain of iodoform gauze inserted into the trephine opening, and the edges of the scalp approximated with silk-worm-gut sutures. The dressing consisted of iodoform gauze wrung out of Bi-chloride solution, covered with plain gauze sublimated, non-absorbent cotton and a bandage.

The gauze drain was removed in 48 hours and a similar dressing reapplied. The temperature reached $101\frac{4}{10}^{\circ}$ on the third day but fell to normal after free purgation. The wound healed throughout by first intention, and the patient was discharged well on the eighth day. What would have been gained by waiting for positive symptoms? Only to favor the inception of inflammatory processes and render the prognosis more unfavorable.

The analysis of a few doubtful signs may be worthy of note. Loss of consciousness may vary from slight stupor to complete coma but does not indicate the severity of the lesion. Total loss of consciousness I have found to be very uncommon in these cases, but when associated with paralysis must be differentiated from alcoholism, apoplexy and narcotic poisoning. I recall a case of gun-shot wound of the skull in which the ball penetrated the right frontal lobe to the depth of one inch, and the man remained conscious for three days until cerebritis intervened, followed by fatal issue a week later. Loss of consciousness, uncomplicated, lasting more than six hours would most emphatically indicate an exploration.

There is a form of stupor that comes on after these injuries, in from a few hours to ten days, insidious in its onset, amounting at first only to slight drowsiness or a dulling of the mental faculties, and increasing up to a condition of coma. Especially in children is this of late appearance, depending in part on the location of the injury, but due largely, I believe, to the elasticity of the child's skull and the more ready adaptability of the brain to pressure, as compared with the adult.

In all cases of head injury should this slowly creeping stupor be watched for, and its onset is the signal for immediate incision. Note the following case:

I. E.—aged 40 years, was thrown from a carriage and sustained severe bruises of the left side of the head and body, and a small lacerated wound of the scalp in the left supra-orbital region. The fall rendered him unconscious, but he recovered consciousness for a time and then

gradually fell into a stupor. Forty-eight hours later, when surgical aid was summoned, he was unconscious, but could be aroused with difficulty. There was considerable boggiess of the left side of the scalp, persistent bleeding from the left ear, pupils moderately dilated and non-acting, but no paralysis. After etherization and the customary cleansing of the scalp, the wound in the forehead was enlarged and the skull found intact at this point.

The incision was then carried backward through the parietal region and the area of greatest swelling, revealing a curved fracture above and parallel to the posterior half of the temporo-parietal suture. From the middle of this and extending toward the ear was another fissure with a depressed triangular fragment.

After trephining, the fragment was elevated and the opening enlarged showing an enormous extra-dural clot which was carefully washed out. The vessels ligated, the entire wound was packed with iodoform gauze and covered with sublimated dressings. The following day the patient was rational, pupils normal and react, and no evidence of shock. Four days later he was again anaesthetized and the scalp sutured under strict antiseptic precautions. The next day he was nervous and excitable and developed a raging delirium, probably due to traumatic meningitis, which necessitated forcible restraint. This finally subsided under treatment and the patient made a slow convalescence.

The condition of the scalp often gives a clue to the extent of the injury. A rapidly appearing swelling which is well outlined, tense and firm, would indicate a haematoma, and results from a quick blow; while a more diffuse swelling or boggiess of the scalp comes with a fall or more serious injury, and is more often associated with symptoms of compression, especially if it increases later, and should always be viewed with suspicion. Either of these conditions with a history of considerable violence or associated with any mental symptoms, demands prompt surgical interference.

The following case will illustrate another condition of the scalp, and the late development of mental symptoms in children.

A child two and a half years old, fell down stairs striking on the left side of the head. After recovering from fright she appeared to be uninjured save for a small swelling in her scalp, but a week later she began to be drowsy, didn't care to play and took little interest in things about her. At the time I first saw her, on the eighth day subsequent,

she was somewhat stupid but easily aroused, and on the left parietal region, rather posteriorly, was a peculiar "crater-like" swelling of the scalp, with an indentation in the center, giving to the touch the sensation of a depressed fracture, and that diagnosis was made. The incision revealed, instead of a depressed fracture, a fissured fracture nearly four inches long following the curve of the parietal ridge but a little inferior to it. The skull was trephined and the opening enlarged so as to remove an extra-dural clot some three inches long by one and a half inches wide, which had become partially organized. This was carefully scraped away, a gauze drain inserted and the scalp closed with silk-worm gut sutures, the wound being dressed in the usual manner. The drain was removed in two days and the child made an uneventful recovery, the wound healing primarily under rigid antiseptic treatment. This case would, no doubt, have been operated earlier had it come under observation.

Another case in which this "crater-like" swelling appeared, was a woman who had been struck with a bottle, but the exploratory incision revealed no fracture.

Granted, that 50 per cent. of these particular cases turn out to be contusions, is it not better for the patient to take the risk of the incision rather than court the dangers and results of skull fracture unoperated.

I would especially urge the most careful watchfulness in cases of head injury occurring in children, no matter how trifling they may appear at the time.

How many epileptics date their seizures from a fall?

How many insane give a history of traumatism?

W. F., aged 12 years, fell from an apple-tree when six years of age, striking on the top of his head. His mother states that he was unconscious three days, then gradually recovered until apparently well. After a couple of years it was noticed that he was getting dull at school, had trouble in learning his lessons, inclined to be unsteady in his gait and would often stumble. This condition became progressively worse until now he is practically an idiot, with nearly complete loss of the power of locomotion, hardly recognizing his parents, and giving no attention to what is said to him, but peculiarly addicted to profanity which he uses when disturbed to any extent. Give him a few spools or a doll and he will lie content for hours, but any attempt at diversion elicited indescribable cries which were anything but human.

He was brought to the Hospital with a hope of obtaining possible

benefit. A trephine opening was made in the posterior part of the parietal bones on either side of the median line and the skull found to be greatly thickened at this point, showing the existence of a chronic inflammation at some previous period. He survived the shock of the operation and was discharged some two months later only slightly improved, though sufficient to be demonstrated.

How much would an exploratory incision have done for him in the first 24 hours following the injury?

THE EARLY SYMPTOMS AND THE TREATMENT OF HIP-JOINT DISEASE.

By A. M. PHELPS, M. D., New York City. Professor of Orthopædic Surgery, Medical Department of the University of New York; Professor of Surgery, University of Vermont; Professor of Orthopædic Surgery, New York Post-Graduate School and Hospital; Surgeon to the City Hospital, Etc.

Before considering the early symptoms of hip-joint disease, I would like to call attention briefly to a few facts which are observed clinically. Joints attacked by inflammation either intra or extra capsular have a condition of rigidity or spasm of the muscle about them. This is due to irritation of the terminal nerve plates in the area of disease transmitted through the reflexes. The muscles operating upon the joint, which are supplied by a nerve given off from a common nerve trunk (one branch distributed to the area of disease the other to the muscle), are affected by spasm, while the other muscles may remain quiescent. That muscle affected by spasm will rapidly atrophy. These facts are observed particularly in inflammation of the knee-joint. The knee-joint is supplied posteriorly by branches from the great sciatic nerve. The patella is supplied by nerves given off from the anterior crural. When inflammation attacks the condyles, flexion and rapid atrophy always takes place, but in patella disease or diseases located anteriorly, the limb remains in the straight position, owing to the fact that the reflexes are distributed through the anterior crural, and not through the great sciatic. Assuming that these propositions are correct, and clinical observations seem to demonstrate them, we must at once conclude that rigidity of the muscles from spasm, producing a limit of motion, would be the first symptom observed in any joint disease. Limit of motion in any joint produces deformity, we would designate as the second most common early symptom in joint disease, deformity. This limit of motion and deformity produces a limp. So I think we can safely say that limit of motion, deformity and limp are nearly always, if not always,

present in hip-joint disease in the early stages. There are in general joint diseases, eight cardinal symptoms, two or more of which are always present. These cardinal symptoms are pain, heat, swelling, pain on joint pressure, limited motion, spasm of the muscles, atrophy and deformity. Each joint has superadded to these eight cardinal symptoms, other special symptoms. These special symptoms are due to the anatomical characteristics of the joint. In hip-joint disease pain is not always a common symptom, rise of temperature owing to the depth of joint is hardly perceptible: swelling is not seen until effusion or discoloration takes place; pain on joint pressure is present only in intra-capsular disease, located between or near the articular surfaces. Limited motion, spasm of the muscle, limp and deformity, with apparent lengthening or real shortening, are nearly always seen associated together. Atrophy pretty constantly occurs, especially in bone diseases, and it may occur as early as the tenth day. The other symptoms observed in the early stages, are night cries, pain in the knee, flattening of the buttock, partial or complete obliteration of the gluteal fold,

When the limb is in a straight position, the muscles accurately balance it, but when the limb becomes flexed, the action of these muscles is changed in proportion to the amount of flexion. If these muscles are in a condition of excitability or spasm from reflex irritation, one can easily see how various deformities can take place depending entirely upon the position of the limb when the muscles act. When this great mass of muscles is affected by spasm, which is always the case in inflammation, one can readily see how limit of motion and deformity to a greater or less extent, must be the earliest symptoms observed.

Before the last American Orthopedic Association, I presented a model, together with several dissections which I had made of the joint, for the purpose of demonstrating why the limb assumes certain positions with occasional exceptions, when the joint is inflamed. The capsule of the normal joint is twisted around the head and neck in such a manner that when the limb is in the straight position, great tension is exerted upon the joint through the capsule and its other ligaments. Now, when the joint or capsule becomes inflamed, the patient invariably places his limb in a slightly flexed and adducted position to relieve tension, and changes altogether the action of the muscles, they being in a condition of spasm, together with the voluntary act produce the deformity of the first and second stage of the disease. When flexion takes place just a little further, the action of the muscles is entirely changed; abductors become inward rotators: outward rotators become, to a certain extent, abductors, etc., etc. Resistance not being offered to the abductor muscles, the limb, by their contraction, passes over to the deformity of the third stage of hip-joint disease, that is abductive flexion and inward rotation. There are exceptions to these deformities, which I have designated as erratic, but they will not be considered now.

These deformities take place whether disease is intra capsular or extra capsular, whether there is effusion into the joint or not, and let me say here, that only a limited number of cases have effusion into the joint in the early stages.

To conclude—The importance of symptoms, I believe, speaking generally, occur about in the following order:

1. Limit of motion.
2. Deformity, with apparent lengthening or real shortening.
3. Limp.
4. Atrophy (bone disease).
5. Pain in knee (with absence of knee-joint disease).
6. Pain on joint pressure
7. Night cries in absence of other joint disease.
8. Flattening of buttock, with change in gluteal fold.
9. Heat.
10. Swelling.

The order of these symptoms might be transposed a little by some authors, but this order will answer for diagnostic purposes.

TREATMENT.

The treatment of hip-joint disease is divided into the operative and mechanical. In all cases where abscesses are present they should be immediately evacuated. This enables the surgeon to intelligently explore the diseased joint with his finger, and ascertain to what extent the disease has progressed. If the head of the bone is separated from the neck it should be removed, together with the great trochanter and the neck. The acetabulum if diseased should be thoroughly curetted, together with any other diseased tissue that may be found in the joint. If only small points of disease are found within the joint, those should be curetted, together with whatever diseased tissue exists within the joint, and the cavity washed out with bichloride solution, 1 to 2,000. The joints should now be filled with a solution of iodoform and glycerine, one-half ounce of iodoform to four of hot glycerine. After this has been done, the patient should be put in bed, with extension in the line of deformity and lateral traction above the knee, amounting to about three pounds. Day by day the limb should be lowered, until the deformity is overcome. When the deformity is overcome, the lateral traction traction splint which I devised and use in the Post Graduate and University Dispensaries should be adjusted, and the patient put on crutches with a high shoe on the well leg. Puss and tubercular material destroys living tissue, and when joints are allowed to macerate for weeks and months in these materials, which now seems to be the favorite method of many of our Orthopædic surgeons, extensive destruction of bone will almost surely follow. In many cases extensive cutting of muscles, tendons and fascia may be necessary to overcome the deformity. The reader will see, then, that we believe that deformities should be first overcome and all abscesses opened before the mechanical work begins. No case of hip-joint disease need recover with angular deformity, and to secure and attain this end steps should be taken at the commencement of treatment to place the limbs parallel, after which the lateral traction traction splint, already alluded to, will prevent the patient from becoming again deformed.

MECHANICAL TREATMENT.

For many years the profession have been taught that the long traction splint used by Sayra, Taylor, and others, was the proper machine to use. The patient is allowed to walk upon this splint, using it as a perinel crutch. The splint stops at the trochanter and exerts no power on over the joint that account to fix the joint. The patient stepping upon this splint with the strap around the perineum, causes contrauma of the joint while walking, and nearly every splint that I have seen adjusted allows the patient to put his toe upon the ground, which, of course, drives the head of the bone into the acetabulum each time the patient steps. This pumping of the head of the bone backward and forward into the joint at the rate of 2,000 times an hour each day, as the child runs, accounts for the disastrous results which we see published from institutions where this splint is used. The statistics published by Shaffer and Lovett in the New York Medical Journal from the 59th Street Orthopaedic Dispensary, in 39 cases reported on in a series of many hundreds :

Ankylosis.....	19
Slight motion.....	6
	—
	25
Motion from 10 degrees.....	7
Motion to right angle.....	3
Motion free.....	3

The three with free motion were treated during the first stage of the disease ; two were under three years old. There were only two cases without shortening. The splint used was the long traction, which I have already described,—one which admits of free motion at the hip-joint and the patient is allowed to walk upon. This splint was devised during a time when it was believed that fixation would produce ankylosis of the joint, and that motion was necessary to keep up the nutrition of the joint. It is needless for me to say that we have outgrown both of these ideas. The statistics of Chambers' Street Hospital of 50 consecutive fractures of the elbow-joint show only one case of ankylosis. These patients were fixed in plaster of Paris for many weeks, without passive motion. In the Post Graduate Hospital and University Dispensary we fix our cases of hip-joints from one to five years without motion, with the lateral traction fixation splint, and in our long series of cases not one has resulted in bony ankylosis, and where we have had control of the patients they have recovered, practically, without angular deformity. Shortening is seen in this long series of cases only from non-development of the limb, and extensive bone destruction. The accompanying cuts and description will convey a very accurate idea of the splint which we use in our treatment after the deformity has been in bed overcome. Tissues inflamed or diseased should be put at rest, to allow the normal process of repair to take place without the trauma of motion. This is the law. It is applied in the treatment of the iris, fractures, sprains, and any other tissue that can be immobilized. To carry out the requirements of this law so far as is possible I was led to devise the splints illustrated in this article.

To fix the hip-joint a splint must extend from the foot to the axilla. (See Figs. Nos. 1 and 2.)



Fig. 1.

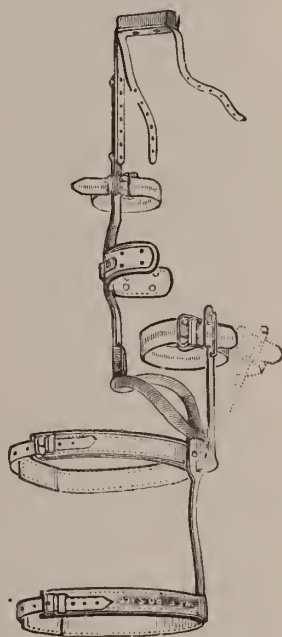


Fig. 2.

Fig. 2 represents the perineal crutch, with the abduction bar (1), adjustable by means of the key (6), for the purpose of making lateral extension. The steel bar (2) is adjusted to the steel ring (3), which makes a firm crutch, the pressure coming on the tuberosity of the ischium. Adhesive straps extending to near the body from the ankle furnish means of extension by tightly buckling them to the straps (7, 7), the ring (3) furnishing counter-extension. The rod (5) ending in the upper ring, prevents flexion and extension of the legs. The splint is intended to prevent every motion at the hip-joint, and at the same time apply extension in a line with the neck of the femur. Fig. 1 shows the crutch and splint adjusted, the patient using crutches and standing upon a high shoe upon the well leg.

This splint I found a little too expensive for dispensary work. I then constructed the splint (Fig. 3), which simply does away with the extension joint and key. This was also too expensive for hospital work, but both splints did the work perfectly.

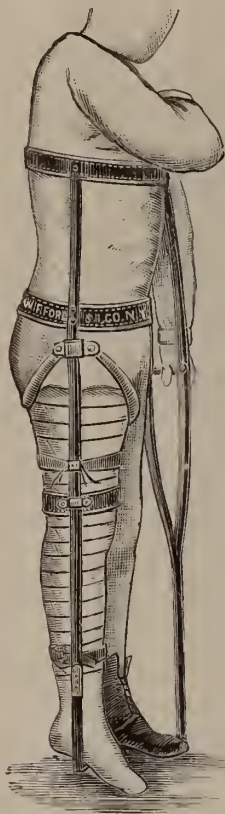


Fig. 3.

After a time, for my poor patients in the hospitals and dispensaries, I succeeded in perfecting a cheap splint, which applies the principle of fixation and traction in the line of the neck.

A glance at the cut will convey the idea. Fig. 4 is the single, and Fig. 5 the double splint for double hip disease. The splint is a bar of steel, extending from the foot to the axilla, accurately bent to fit the body. A tracing made on paper by laying the child on it will assist in shaping the bar. A pelvic belt, a thoracic belt, and a steel perineal ring complete the fixation part of the splint. The straps in the foot-piece buckles to adhesive straps attached to the leg, which make longitudinal traction. The strap lashes the leg to the splint, making lateral traction precisely as the abduction bar acts in Figs. 1 and 2.

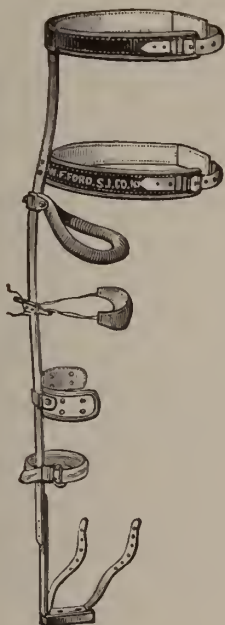


Fig. 4.

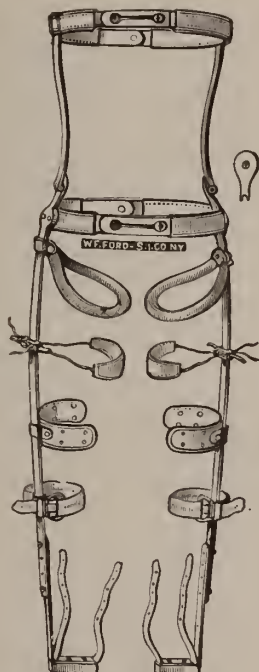


Fig. 5.

An ordinary blacksmith can construct this splint.

Before either these or any other splint is adjusted, however, the patient should be treated in bed until deformity is overcome and the active stage of the disease somewhat modified.

To conclude, my observations lead me to believe that the most serious element of destruction in hip-joint disease is the trauma and pressure produced by the spasm of the muscle ; and walking on the splint ; that fixation of the joint without extension is an impossibility ; that the successful treatment of the joint must depend upon its absolute immobilization, which can only be produced by proper extension and fixation ; that the constitutional treatment of hip-joint disease amounts to but little, independent of mechanical treatment ; that mechanics is everything ; that *extension in a line with the axis of the shaft and deformity alone, in hip-joint disease, is entirely wrong* ; that extension should be made in a line parallel to the axis of the neck—in other words, *two lines of extension*—otherwise the idea of extension is not perfectly carried out ; that ankylosis of the joint is not produced by immobilization, but by the severity and character of the inflammation ; that the long traction hip-splints in general use neither properly extend nor immobilize the joint ; that the intra-articular pressure results in the destruction of the joint or ankylosis in a large percentage of cases is proved by statistics that the results in hip-joint disease should be as good as those of knee-joint disease, and will be, provided perfect immobilization can be carried out ;

that patients should never be allowed to step on any portative apparatus ; that a high shoe on the well leg and crutches should be insisted upon until the patient is cured ; finally, *that the angular deformity seen in cured cases should not occur, and such cases are a standing rebuke to the splint and methods employed. In other words, no patient with hip-joint disease need ever recover with angular deformity.* In exceptionally neglected cases of dislocation, a slight amount of deformity had better be left than resort to osteotomy.

No. 40 West 34th Street.

ANTITOXINE.

RECENT RESULTS FROM THE USE OF ANTITOXINE OR DIPHTHERETIC SERUM.

By W. E. HIBBARD, Ph. G., M. D., Medical Director Riverside Sanatorium ; Member N. Y. County Medical Association, Etc., Etc.

In the latter part of November I received a sample of antitoxine through a friend. I injected 25 c. c. in a female St. Bernard dog weighing about 104 lbs. One hour later the dog began to show signs of general restlessness, heart action was increased and weakened. She refused to eat for one day, showing symptoms of pain in various parts of the body.

One week later I injected 50 c. c. in a male St. Bernard weighing about 130 lbs., which exhibited the same symptoms as female dog, only more marked. The heart's action was weak, in fact so much so that, he being a valuable dog and not wishing to lose him, I injected whiskey and nitro-glycerine. He refused to eat for four days and we were compelled to resort to forced feeding. One week later he had apparently fully recovered.

I next injected six rabbits with 10 c. c. each. They all showed after effects of the serum, being inclined to sleep and disinclined to eat. The second day I went to the cages and found two dead. The other four are still living.

I next injected antitoxine in a case of diphtheria, child seven years of age, which I will state looked fatal from the first. I injected, first 15 c. c., and three hours later 12 c. c., and five hours later 10 c. c., nevertheless the case steadily grew worse.

Proxide of Hydrogen and a strong saline solution were used at same time as sprays for nose and throat. Case died four hours after last injection was made.

I injected 15 c. c. in a child seven years of age, weight 56 lbs., color light, who showed severe throat trouble, and in whom a membrane appeared later. I

examined urine at two different times before the injection of serum was made, and no albumen was found; after injection, albumen was found present in urine to a marked degree.

I watched case for three hours after injection and a rise in temperature was noted, likewise increased heart action, respirations being increased ten per minute. This case recovered, but would say that upon microscopic examination the Klebs-Loeffler bacillus was not found present.

During the past month I treated five cases of diphtheria, in which on microscopic examination the Klebs-Loeffler bacillus was found present.

I put them on the good, old plain iron treatment with suitable saline antiseptic sprays and inhalants. The five cases have all so far recovered as to be out of danger.

My friend, H. C. Elsing, M. D., of Ridgefield Park, N. J., reports a case as follows: "Jessie, about six years of age; on Thursday her mother first noticed a spot on tonsil; Friday I was called and found it to be a case of diphtheria. I decided to inject antitoxine, and made an injection of 15 c. c., the temperature at the time being $102\frac{1}{2}$, pulse 130, respiration 33. I called four hours later and found temperature lower, pulse better and respiration improved. The next morning, temperature was $99\frac{3}{5}$, pulse 83 and respiration 22. Membrane was beginning to peel off. Case continued to improve and temperature did not rise again."

I can cite other eminent physicians who have had like success.

Probably the reason such good results have been obtained in some cases, is, not that the serum has acted curatively, but that mild cases have been treated by the serum therapy. Microscopic examinations should be made in all cases of suspected diphtheria for the Klebs-Loeffler bacillus. The mortality rate in diphtheria is very frequently greatly reduced by all methods of therapy.

A great number of remedies have been recommended—antipyrine, acetanilid, pilocarpine, oil of turpentine, chloride of iron, oil of tolu, cyanide of mercury, bin-iodide of mercury, etc.

For example, Bonnefin lost but 37 cases out of 427 under local treatment. Klitzman lost two out of 73 cases, and Mayer of Aux la Chapelle, in a period of fifteen months, treated 69 cases of diphtheria with iron. He lost but one case and this was in a moribund state when it came under treatment.

As to the harmlessness of diphtheria-antitoxine, urticaria, swelling of the joints, very high temperature, often above 104°F. , coma, weakness of heart and increased rapidity of the pulse, are among the many complications which may occur.

Antitoxine undoubtedly exerts a pernicious action on the kidneys; albumen has been noted to rise from $2\frac{1}{2}$ per 1.000 to 16 per 1.000 and gradually fall to 7.3 per 1.000 when the patient died.

However, I would not by any means condemn diphtheria-antitoxine wholesale, for I believe it will be found of some value and is certainly opening up a rich field for investigation.

A STORY WITH A MORAL.

The following true story is related of a wealthy gentleman who moved his family to a secluded country spot for rest and recreation. His wife was taken very ill one day, and not being able to reach his city physician promptly, the gentleman concluded to call in one of the "country practitioners." Not having a great deal of confidence in their ability, and not being well acquainted in the community, the gentleman hit upon a novel plan for determining in his own mind as to which was the best posted doctor. He accordingly went to the village postmaster and quizzed him as to which doctor in the neighborhood subscribed for the largest number of medical journals. This, he said, was the man to whom he would entrust his wife's case. It is unnecessary to add that the gentleman's judgment was well founded and the lady made a rapid recovery.—*The R. I. Medical Science Monthly*.

ELECTION OF OFFICERS.

The graduating class of the Medical department, University of Vermont, met in the amphitheatre of the Medical school to hold a meeting for the election of class officers. Mr. E. M. Crane was chosen chairman to open the meeting and Mr. H. A. Brown was chosen secretary pro tem. The first motion made was that the class adjourn to the secretary's room down stairs; motion seconded and carried. The class adjourned to the secretary's room, where the election of officers was taken up. The following elections were made :

President—Mr. J. A. Drew.

Vice-president—Mr. E. M. Crane.

Secretary—Mr. J. W. Esterbrook.

Treasurer—Mr. C. P. Curley.

Valedictorian—Mr. H. A. Fisk.

Marshal—Mr. J. T. Lyston.

Executive committee—Mr. J. A. Mack, Mr. G. W. Holden, Mr. S. D. McAllister, Mr. G. S. Heft and Mr. Hussey.

The election moved off very smoothly and the very best of judgment was shown in the selection of the men. The general feeling of the class was that they acted wisely in their election and the result shows that much thought had been given to the subject.—*Free Press*.

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EDITORIAL.

THE COMING WOMAN.

The "coming woman" bids fair to be a marvelous creature. But with all her talents and progressive ideas, we sincerely hope that she will not lose sight of the fact that she cannot improve upon nature's handiwork. Let her not forsake the natural for the unnatural. The laws of divine creation have established her identity, and strive as she will, they remain the same. She has a sacred place to fill in the passing throng, and she cannot say nay. The years have passed away, and the world has changed its clothes several times, but the one great fount of life, maternity, is just the same. It is right that women should have equal chances with men, as regards to development and progress in all things pertaining to life and living, but she should not forsake the duty imposed by an Infinite Power, nor forget that the purest gem does not always have the richest setting.

Every day we receive some kind word expressing good will and interest for the success of the MONTHLY. These things are certainly pleasant and we take this way to sincerely thank those who have seen fit to offer us encouragement. The MONTHLY has been successful, and most of our hopes have materialized. But we want to go on. Every physician in Vermont and Northern New York should not only take the MONTHLY, but he should feel it his duty to contribute to its pages. The MONTHLY ought to become a factor in Vermont medicine, and surely there is nothing to prevent. Let every physician who realizes that its success will aid him in his work contribute whenever the opportunity offers, and prove his interest in the advancement of the profession in New England.



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From Picturesque Burlington.

MEDICAL ABSTRACTS.

KISSING THE DEAD.—This custom, to which many yield in their affectionate devotion to the deceased loved ones, carries with it dangers to which every physician should call the attention of the public. It does not make any difference about the nature of the disease that produced death—whether contagious or not—the body of a dead person is not a very salutary object. It is no unusual thing to see an entire family lingering around the coffin kissing the features of the dead one. Many times subsequent cases of sickness may be traced to just such actions.—*The Charlotte Medical Journal*.

THE MURPHY BUTTON, OR ABSORBABLE PLATES FOR INTESTINAL ANASTOMOSIS.
—R. H. M. Dawborn discusses the relative merits of the Murphy button and the absorbable plates.

He cites six cases where the Murphy button had failed to work in the ideal way it has been supposed to do by its advocates. In one case the patient died a few days after operation, of symptoms of obstruction. Autopsy showed the obstruction due to hard feces blocking up the opening.

In a second case, a colo-colostomy, the button was not passed, and a second operation, six weeks later, showed it to be retained in the colon, on the wrong side. In a third case, colo-colostomy, the button had apparently caused gangrene of the gut at the site of operation, resulting fatally. In a fourth case, the button was retained, and the patient died of peritonitis at the end of twelve weeks. In a fifth, death occurred at the end of ten days, probably from exhaustion. The button was found loose in the stomach. In a sixth, the patient died of another ailment, two or three months later, and the button was still loose in the stomach.

In consideration of these dangers, Dawborn believes we should return to the absorbable plates. He claims that they can be used almost as quickly as the button, and are entirely free from the dangers attending the use of the latter. In regard to results, he states that the 61 cases of gastro-enterostomy, with absorbable plates, with but 14 deaths, or 22.95%, show a mortality less than one-half that following simple intestinal suture.—*The Medico-Surgical Journal*.

TREATMENT OF ARTHRITISM—Cavazzani (Med. Week.; II, No. 52; p. 635).—C. has treated successfully the pain in joints and muscles, accompanied or not by swelling, which is so frequently met with in arthritic subjects, by the prolonged use of bicarbonate of sodium in doses of from 1 to 4 grammes daily. It should be greatly diluted, to avoid irritation of the digestive tract, and should be given between meals, when the stomach is empty.

The Christian Scientists of Burlington, Ia., like their ilk everywhere, deny the existence of a material body. They have, therefore, petitioned the Council

of that city to excuse their children when physiology is being taught. They are evidently afraid that their offspring may awake to a realization of the asininity of their progenitors.—*Ex.*

IT IS HEALTHY FOR CHILDREN TO LAUGH.—An eminent surgeon once said : “Encourage your children to be merry and to laugh aloud ; a good, hearty laugh expands the chest and makes the blood bound merrily along. Commend me to a good laugh—not to a little, sniggering laugh, but to one that will sound right through the house ; it will not only do your child good, but will be a benefit to all who hear, and be an important means of driving the blues away from a dwelling. Merriment is very catching, and spreads in a remarkable manner, few being able to resist the contagion. A hearty laugh is delightful harmony ; indeed, it is the best of all music ”—*The Charlotte Med. Journal.*

CAUTION TO ANÆSTHETIZERS.—During a recent clinic by Prof. Hunter McGuire in the new amphitheatre of the College of Physicians and Surgeons, Richmond, Va., while chloroform was being administered to a patient on whom excision of portions of the bones of the leg was about to be performed ; the patient suddenly stopped breathing, the face became purple, while the heart continued to beat. In a moment Dr. McGuire recognized that the condition was due to the dropping back of the tongue, obstructing breathing. With thumbs behind the rami of the inferior maxilla, he pushed the bone forward, thus lifting up the tongue, and the patient at once began breathing easily, and was kept thoroughly under the anæsthetic for the time necessary for the operation. While this procedure is not, by any means, a new one, it is worth while to record such incidents so as to keep the surgeon or physician well on his guard so as to act the moment when bystanders are dazed at the shock of an impending accidental death. In short, in using an anæsthetic keep your wits about you, and look out for the sudden emergencies.—*Virginia Med. Monthly.*

NEWS NOTES AND FORMULA.

VITALITY OF TYPHOID BACILLI.—It has been found that typhoid bacilli withstands drying for a month at least, and in some cases (in dirt, sand, cloth, etc.) they retain their vitality for several months. This corroborates the general view.

Two lines which should find a place in the *vade mecum* of every physician are: "The pain of spine disease is in the stomach," and "the pain of hip disease is in the knee." No prescription for recurring colic should be written unless it is preceded by a careful questioning of the health of the spinal column.—*Dr. A. B. Judson, in Clinical Reporter.*

The crying error of the day is the mistaking of nerve disease for womb disease.—*Dr. Goodell, in Clinical Reporter.*

Never neglect mammary signs when examining a woman for suspected pregnancy.

All poisons affect the channels of elimination and the nervous system.—*The Medical Brief.*

Chloroform is recommended as a general hemostatic. Apply on lint to bleeding surface. It promptly stops flow of blood and acts as a stimulant to the patient.

For hemoptysis try the inhalation of turpentine.

Ergot raises blood pressure; hence do not give it in cerebral or pulmonary hemorrhage. It contracts the fibers of the uterus; hence give it (with other hemostatics) for uterine hemorrhage.—*Ex.*

PAINFUL OR SUPPRESSED MENSTRUATION.

R. Tinct. gelsemium,
Tinct. caulophyllum, aa. oz. i.

M. Thirty drops every half hour until pain is relieved, flow established or upper eye lids feel heavy, then every two hours or less as the desired result is accomplished.—*Ibid.*

FOR CHRONIC CONSTIPATION :

R. Aloin, gr. xv.
Atrop. sulph., gr. $\frac{1}{4}$.
Strych. sulph., gr. j.
Misce et. ft. pillulæ, No. xxx.

Sig. Take one pill morning and evening.

There are 13,000 medical students in this country at the present time.

When a patient is strangling, break an egg as quickly as possible (do not beat it), and give the white of it to the strangling person; this will almost certainly dislodge the obstruction, whatever it may be, unless it is lodged in the trachea.—*The Medical Brief.*

TUBERCULIN (Parataloid) is still meeting with adverse criticism, conflicting testimony continues to appear in the reports from all quarters. Even as a diagnostic agent opinions differ, and, according to Dr. Henry, of Melbourne, Australia: Whereas, it may be admitted that it is of value for this purpose as far as animals go, and some quite extensive experiments have been successfully completed in this line, both in relation to food-supply cattle and other animals, still, it does not follow that this should serve as a justifiable analogy to apply it in similar cases to man, for the reason that, in addition to the unmistakable dangers of its introduction into the system, the means of diagnosing pulmonary tuberculosis in man is already of such reliability as not to warrant such a risky procedure.

Dr. E. Thorner, of Berlin, Germany, has been one of the most persistent and enthusiastic experimenters on the therapeutic action of this agent. He appears to have guarded his steps as he proceeded in the way of excluding all probable discrepancies, and yet his results are called in question. When he read his paper before a local Medical Society, the discussion was rather adverse to his views. Prof. Leyden stated that in his opinion only here and there could its very cautious use be permitted, and he was compelled to acknowledge that he could not share Dr. Thorner's opinions. Prof. Ewald also took part in the discussion, and stated that as far as clinical and experimental testimony had gone, tuberculin possessed no specific action, and he felt inclined to believe that it would finally be abandoned owing to the dangers attending its use.

Prof. E. Koch has very recently reiterated his modified claim for this agent as being only of service in those cases where the tubercle bacillus alone was present, and that when the case was complicated by the presence of other microbes, it was not only of no service but often did harm.

PERIOD OF INFECTION—According to the rules of the Pennsylvania State Board of Health, the period of infectiousness of contagious diseases is considered to be:

Small-pox—Six weeks from the commencement of disease, if every scab has fallen off. Chicken-pox—Three weeks from the commencement of the disease, if every scab has fallen off. Scarlet fever—Six weeks from the commencement of the disease, if the peeling has ceased and there is no sore nose. Diphtheria—Six weeks from the commencement of the disease, if sore throat and other signs of the disease have disappeared. Measles—Three weeks from the commencement of the disease, if all rash and cough have ceased. Mumps—Three weeks from the commencement of the disease, if all swelling has subsided. Typhus—Four weeks from the commencement of the disease, if strength is re-established. Typhoid—Six weeks from the commencement of the disease, if strength is re-established. Whooping-cough—Six weeks from the commencement of the disease, if all cough has ceased.—*Medical World*.

PHENACETIN (Para-Acet-Phenetidin) has still a very large and successful use, but some conflicting results may be due to its very evident adulteration at times. Acetanilid is largely used for this purpose, and of course vitiates therapeutic results.—This adulteration may be due either to intentional introduction, or to possibly carelessness in the manufacture. Another element in its poor results may be found in the presence of unconverted phenetidin.

In addition to its more or less general routine use internally in influenza, and as an analgesic in all forms of pain, the French are applying it externally in cases of acute rheumatism, according to the following formula :

Phenacetin, 4.5 grammes (about 75 grains).

Lanolin, 23.0 grammes (about 360 grains).

Olive Oil, a sufficient quantity.

BOOK REVIEWS.

Syrup of Hydriodic Acid and Chemically Pure Hypophosphites. By R. W. Gardner, Pharmaceutical Chemist. Twelfth edition. Published by the author, 158 William street, New York city, 1895, pp. 118 and 76. Mailed to physicians only, upon request and receipt of their professional card. This is an exceedingly interesting little book and one of great value from the vast experience of the writer.

Towle's Notes on Anatomy is by far the best book for students on the market. It places the difficult points in such a clear and concise way, that the terrors of anatomy are forgotten entirely in the interest aroused.

The St. Lawrence State Hospital Report for 1895 is out. It is a grand book, explaining the work most explicitly. The Institution deserves great commendation for the report. Without doubt it is one of the best equipped in the country, and the work of the past year compares most favorably with any other institution.

PUBLISHER'S DEPARTMENT.

CLINICAL EXPERIENCES WITH SOLUTIONS OF PYROZONE.

H. C. Raymond, D. D. S., says: "I take pleasure in saying that I have been using the pyrozone solutions for several months, and have found the results highly satisfactory. It is indeed gratifying to know that a drug so valuable as hydrogen dioxide, has been made staple and so free from acid. This will unquestionably widen its field of usefulness in dental surgery.

As a bleaching agent I have had some excellent results with the 25 per cent. solution, and it promises to be exceedingly useful in the treatment of pyorrhœa alveolaris, though I have not been using it long enough in that direction to feel justified in making any definite statements.

The 5 per cent. solution I use largely in setting crowns and bridges, its styptic qualities rendering it extremely valuable in arresting any bleeding, and in effectually stopping up the pores through which moisture will find its way. Operators in crown and bridge work who have not used pyrozone for this purpose have no idea what an aid it is in keeping the parts perfectly dry. I prescribe 3 per cent. pyrozone for my patients, to be used as a mouth wash just before retiring, and specially urge its use to those wearing plates and crowns, or bridges, for its prophylactic qualities are, in my opinion, inestimable."

KOLA.

The marvelous property of endowing its user with the power to endure severe and prolonged mental and physical exertion without taking food and without feeling fatigue is the particular virtue which has attracted attention to Kola. It diminishes the elimination of nitrogen, or, in other words, it lessens the tissue waste resulting from decomposition of nitrogenous substances. Therefore, while not a food *per se* it economizes the reserved forces and by lessening fatigue permits prolonged exertion. After thorough experiments and careful work, F. Stearns & Co., of Detroit, Mich., are now enabled to present a preparation of Kola made from these fresh (undried) nuts, which they believe not only faithfully represents the virtues of the native fresh (undried) Kola, but one which will fully bear out the claims made for this drug by the natives, as well as the travelers and explorers of Africa. This preparation, "Kolavin," is in the form of a delicious wine, each tablespoonful dose of which represents thirty grains of fresh (undried) Kola nut. Careful clinical work with "Kolavin" will demonstrate its great value as a tonic stimulant, as well as prove its marked superiority over any preparation made from the ordinary dried Kola nuts found in commerce.

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It is not a reference book by any means but for the general text, it far exceeds anything else.

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The Vermont Medical Monthly



April, 1895.

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SAMUEL E. MILLIKEN, M. D., *Surgeon-in-Chief of the New York Infirmary for Crippled Children; Surgeon to Randall's Island Hospital, etc.*, in the course of an article entitled "**Tubercular Joint Disease in Children,**" which appeared in *La Revista MédicoQuirúrgica*, February, 1895, said :

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The Vermont Medical Monthly,

*A Journal of Review, Reform and Progress in the
Medical Sciences.*

VOL. I.

APRIL, 1895.

NO. 4.

(Original Papers)

RADICAL CURE OF HERNIA.

HALSTED'S OPERATION.

Clinical Lecture delivered March 9th, 1895, by JOHN B. WHEELER, M.D.,
Professor of Clinical and Minor Surgery, University of Vermont.

Gentlemen:

The patient on whom I am about to operate is a chore-boy in a hotel. He is nineteen years old, healthy and well developed. Two years ago, without any strain, injury or other cause which he can assign, a hernia made its appearance by way of his right inguinal canal. For a hernia to appear in this uncalled for fashion is, as you are aware, rather unusual, but the inguinal canal in this case is very large and affords easy exit for the hernia. Probably some slight exertion, which the patient did not notice, was enough to start the hernia on its way through such an unobstructed channel. At first the hernia came down but seldom and was easily reduced, but for the last few months it has been very troublesome. It not only comes down much oftener than formerly and keeps coming down oftener and oftener, but, although the patient has tried a number of trusses, he cannot find one which will hold the hernia back. It slips out from under the truss, which then, by its pressure on the hernia, hurts the patient more than it helps him. As he can get no relief from a truss, he comes here to have an operation done, by which his hernia will be cured, if there is any such thing as curing it.

Within the last few years, there has been a great change in professional opinion regarding the advisability of operating for the radical cure of hernia. I am not speaking of strangulated hernia, for that is a condition in which you *must* operate if you mean to do anything to save your patient's life, but of reducible hernia, in which the question is whether the patient shall wear a truss or undergo an operation. Before the days of aseptic surgery, an operation on a hernia, like all other operations which dealt with the peritoneum, was a very dangerous matter and was seldom performed unless in some such emergency as strangulation. But as soon as it was discovered that asepsis enables us to open the peritoneal cavity with but little danger, a number of operations were devised for the radical cure of reducible hernia, all of which were at first warmly advocated. But as time went on, most of them proved to be inadequate, that is, in many cases the hernia refused to stay cured, but recurred a longer or shorter time after the operation, and the opinion gained ground that, after all, radical operations for hernia were hardly worth while. Of late, however, the profession is taking a more optimistic view of the question. This is due to the small mortality and excellent results which have been obtained by the operations of MacEwen, Bassini and Halsted. MacEwen reports a series of 98 cases with only one relapse and one death. Bassini a series of 251 cases with seven recurrences and one death, and Halsted a series of 82 cases with no relapses and no deaths. The observations on which these reports are based extend over periods of from one to ten years. While other operators who have used MacEwen's method have not equalled MacEwen's results, the operations of Bassini and Halsted have proved as successful in other hands as when done by their originators. Dr. Coley of New York, for instance, has lately reported a series of 160 cases of Bassini's operation without a death or a relapse.

All this shows that if the right operation is selected and if it is properly performed, the risk to the patient is small and the prospect of permanent cure good. We are therefore justified in advising an operation for any hernia which gives its owner much trouble. If the operation is successful, it relieves the patient from a great annoyance, and what is still more important, it obviates the danger that the hernia may some time or other become strangulated. And even if a relapse occurs after the operation, the resulting hernia is almost always more easily controlled by a truss than the one which existed before the operation. But in cases (and they are numerous) where the hernia is easily and

comfortably controlled by a truss, an operation is not to be recommended, unless the patient is going to live in some thinly settled, half-civilized region where it would be difficult for him to get a new truss if his old one should happen to break. In a case like the present one, where the hernia is constantly coming down and making trouble, the advisability of an operation is unquestionable.

As the patient is, by this time, fully etherized, he may be brought into this room. On inspection, I notice that his hernia, which was down half an hour ago, has gone back during etherization, so that you cannot see it. When down, however, it is rather larger than an egg, and is of a soft, doughy consistency. It has never been strangulated. The right inguinal canal will almost admit two fingers, while one finger can easily be pressed clear into the abdominal cavity. Although there never has been any hernia on the left side, the left inguinal canal is only a little smaller than the right. Of course such large canals strongly predispose to the occurrence of hernia.

The operation which I intend to perform is Halsted's, so called, from its originator, Dr. W. S. Halsted, Professor of Surgery in Johns Hopkins University. It consists in laying open the inguinal canal throughout its whole length and then prolonging the cut as far outward from the internal ring as seems advisable, isolating the sac, closing its neck by stitching as high up in the abdomen as possible, and cutting the sac away below the seam, then lifting the spermatic cord out of the canal and excising most of its veins, and then stitching the upper and inner wall of the canal to the lower and outer wall. The canal is thus obliterated, and the cord lies under the skin on the outside of the abdominal muscles. The skin is then sewed over the cord and the operation is done.

Bassini's operation is very similar. The principal difference is that Bassini obliterates the inguinal canal by stitching the internal oblique, transversalis and transversalis fascia to Poupart's ligament and transversalis fascia, then lays the cord on the seam thus formed and over it sews the aponeurosis of the external oblique to Poupart's ligament, while Halsted sews the canal up solidly and leaves the cord covered with nothing but skin. MacEwens operation is done on an entirely different plan. The inguinal canal is not laid open, and the sac, instead of being cut away, is folded into a sort of pad which is stitched to the inside of the internal abdominal ring, thus blocking the ring and preventing the hernia from protruding through it.

I now begin operating by making a cut which begins an inch and a half outwards from the internal abdominal ring and goes straight to the spine of the pubes. After dissecting down until the external abdominal ring and its surroundings are in plain sight, I pass my finger into this spacious inguinal canal and lay it open with scissors, the finger acting as a director, and then cut through the abdominal wall to a point half an inch beyond the internal abdominal ring. I now isolate the collapsed sac, which protrudes from the canal, and as, in this case, the sac is quite adherent to the surrounding tissues, its separation from them is a matter of some little time. The easiest way, I think, is to open the sac and insert the left forefinger, over which I can draw the sac tense, and then tear the adhesions with my right hand, or, letting the assistant pull on the adhesions, clip through them with scissors. On laying the completely isolated sac freely open, I find that the omentum is adherent to one side of the neck. This adhesion is separated with the fingers without much trouble, and I now draw down through the canal a piece of omentum as large as my two hands. This probably constituted the hernia. I shall remove it, because it is of no particular use to the patient and because the risk of recurrence of the hernia is somewhat diminished by such a diminution of the abdominal contents. I transfix the omentum with three interlocking ligatures of braided silk, at the point where it issues from the abdomen, tie the ligatures firmly, cut away the loose end of omentum, sear the stump with the Paquelin cautery, cut the ends of the ligatures short and drop the stump into the abdominal cavity. It now remains to dispose of the sac, and here I shall modify Halsted's method somewhat. He sews the sac together where it issues from the abdominal cavity, but, as you see, I am transfixing the sac with a double silk ligature and tying it off. My reason for doing so is that, in this case, I think I can tie a little higher up than I can sew. The higher up, or the farther in, you can tie or sew the sac, the smoother the inner surface of the parietal peritoneum will be. If a depression or dimple is left where the sac used to be, it is liable to be deepened by the pressure which the abdominal contents make against it. A knuckle of intestine or a lump of omentum, driven into such a place by the impulse of coughing or by other muscular effort, gradually deepens the depression, and thus, little by little, a new hernia is produced. It is of the highest importance then, in any operation where the sac is removed, to obliterate any such depression, and therefore I transfix and tie off this sac as high as I possibly can. The loose

end of the sac is now cut away, the stump seared and the ligatures cut off short. The spermatic cord, which has already been separated from the sac, is now completely isolated and lifted out of the wound. Halsted recommends the excision of all of the spermatic veins except one or two, believing it important to diminish the size of the cord as much as possible and thus leave the smallest possible hole in the abdominal wall after closing the wound. Here again I propose, in this case, to modify Halsted's operation, by leaving the veins alone. In the first place, in Bassini's operation, which, as has been said, closely resembles Halsted's, the veins are not disturbed and yet excellent results are obtained. In the second place, it is not a perfectly safe thing to interfere with the vascular supply of the testicle, as is shown by the atrophy of that organ which has been known to follow operations for varicocele. In the third place, the veins of this particular cord are small and do not require a large opening to enter the abdomen. So I shall let them be, and, bringing the cord into the outer angle of the wound, close the canal with sutures. The cord is carried into the outer angle of the wound because the muscles are thicker there than at the internal ring, and consequently will unite more firmly around the cord than they would at the ring. The stitches are now inserted through the whole abdominal wall except the skin, uniting Poupart's ligament and transversalis fascia to transversalis fascia, transversalis and internal oblique muscles and aponeurosis of external oblique. The so-called "mattress stitch" is the one employed and the material used is silk-worm gut. This is my third departure from the method of Halsted, who uses silk stitches. I use silk-worm gut because, in my work, buried stitches of that material have given better results than those of silk. So far as my observation goes, buried silk-worm gut stitches are stronger and less liable to infection than silk ones. The spermatic cord is now laid upon the aponeurosis of the external oblique and the skin wound closed over it with a few heavy silk-worm gut stitches and a number of superficial catgut ones. As there is no reason to expect suppuration, no drainage is used. The dressing consists of iodoform gauze, bichloride gauze and absorbent cotton.

The patient will be kept in bed for three weeks. If his bowels do not move spontaneously, they will be moved on the fourth day by repeated small doses of Rochelle salts, a teaspoonful every hour till a movement is obtained. His diet will be liquid during the first week, and after

that a gradual return to solid food will be made. If everything goes well, the dressing will not be changed for a week.

March 16. The hernia patient of a week ago, gentlemen, comes before you to-day to have his dressing changed for the first time. The only unfavorable feature in the case thus far has been a severe bronchitis, which came on directly after the operation and lasted two or three days, during which time the patient coughed a great deal and very hard. As I remove the silk-worm gut stitches you will notice that the wound has healed by first intention throughout, with no sign of suppuration anywhere. The dressing which I now apply will not be disturbed for two weeks more, if everything goes well.

March 30. This is the patient on whom we operated three weeks ago, for hernia. He has been allowed to get up to-day, for the first time. I now remove his dressing for the first time since it was changed here two weeks ago. There is solid union of the wound throughout. The spermatic cord is plainly to be felt under the skin, but I can feel no external abdominal ring and no impulse on coughing, in spite of the fact that a severe strain was put on the wound by the troublesome cough which followed the operation. The operation, then, is a perfect success thus far. It remains to be seen whether the hernia will recur in future. According to the statistics of the operation, the chances of recurrence are very small, still it may take place. The patient will wear no truss, as the pressure of the pad tends to weaken the cicatrix of the wound, and thus predisposes to recurrence. He will wear for the present a spica bandage, and in a short time an abdominal supporter. If he wears a supporter for a few months and is careful not to lift heavy weights or otherwise strain himself, he may confidently hope for a permanent cure of his hernia.

NEURECTOMY OF THE SECOND AND THIRD BRANCHES OF THE FIFTH NERVE

FOR CURE OF CHRONIC FACIAL NEURALGIA (TIC-DOU-
LOUREUX) OF TWO YEARS' STANDING—
RESULT, RECOVERY.

BY AUGUSTUS C. BERNAVS, M. R. C. S., ENG.; Professor of
Anatomy and Clinical Surgery at the Marion-Sims
College of Medicine, St. Louis.

The patient, aged 50, white female. Family history: Has one sister who suffers from emotional insanity; otherwise the family history is good. Previous health excellent.

The present trouble began in March, 1892, with severe neuralgic toothache, localized in the right lower molars. Paroxysms were of daily occurrence, and most severe in the morning about breakfast time. The pain subsided temporarily whenever the teeth were pressed firmly together or upon any substance held between them, but only to return when the pressure was withdrawn. The presence of anything cold in the mouth immediately produced the most excruciating pain, which was so severe at times as almost to produce unconsciousness.

After two months the pain became continuous, and four molars were extracted without in any way relieving it. On the contrary, the pain increased in severity until October, when it ceased for a period of two weeks and then returned as severely as before. Another tooth was sacrificed, but without relief; the pain became continuous until last June, when it again subsided for a period of six weeks. A recurrence then took place, together with an involvement of the parts supplied by the second branch of the fifth nerve. Pain has been constant in spite of all treatment until the operation.

Present condition.—Patient is inclined to be plethoric. Internal viscera and functional activities normal.

Operation.—Being prepared and chloroformed, a longitudinal incision, three centimeters in length, was made a little to the right of the infra-orbital foramen, the soft parts held back by the retractors,

exposing the nerve as it emerged from its foramen. A puncture was next made close to the outer canthus, and a fine tenotome pressed inward, its point being held close to the floor of the orbit. As soon as the point of the knife was arrested by the edge of the great wing of the splenoid bone the blade was turned about twenty degrees upon its own axis and drawn slightly forward. By this motion of the blade the second branch of the fifth nerve was divided near its origin from Meckel's ganglion and near its first exit from the cranium through to the foramen rotundum.

Hemorrhage from the accompanying artery was insignificant. The nerve was then drawn out at the infra-orbital foramen until it was completely extracted from its canal. The branches supplying the skin of the cheek, upper lip and nose were followed a short distance toward the periphery and then cut off.

For resection of the third branch an incision was made down to the bone, beginning at the angle of the jaw and extending to within 2 cm. of the symphysis. At a point 5 cm. to the right of the symphysis two holes were drilled through the bone side by side and 15 cm. apart. The jawbone was sawed through between the holes, and the proximal end dislocated outward. The lingual nerve was thus exposed and isolated. The periosteum and soft parts were then freed from the jawbone, exposing the third branch of the fifth nerve as it entered the internal maxillary foramen. The nerve was followed up to its escape through the foramen ovale and then cut off with scissors and drawn out. The soft parts being adjusted, the ends of the jawbone were brought in apposition by a silver wire. The outer wounds were closed by silk sutures, except the one at the outer canthus, which was too small to require such attention. As a dressing I used the campho-phenique powder, which was thickly dusted over all the wounds. This powder has no offensive odor of its own, and, in fact, is a powerful deodorizer and disinfectant.

Convalescence has been uninterrupted, primary union resulting in all the wounds. The silver wire was removed about the fifth week, good union having taken place.

Eight weeks have now elapsed since the operation, and no recurrence of the trouble has taken place. As is usual in such cases, the patient is elated over the relief from suffering, and her expressions of gratitude are almost ecstatic.—*The Courier of Medicine*.

RHEUMATISM AND ITS TREATMENT.

By ELLICE M. ALGER, M. D., Attending Physician Demilt Dispensary.

Perhaps there is no disease which gives the general practitioner more trouble than rheumatism; the difficulty coming partly from the patients dislike to follow exactly the directions of his attendant, and partly from the physicians understanding, only in a general way, the processes which have produced his patients condition. For a long time it was supposed that rheumatism was caused by a germ but this theory has been generally dropped because an attempt to isolate the microbe have failed and because a more plausible theory has been advanced.

It has long been observed that as the proportion of urea in a patient's urine falls and that of uric acid rises, so the severity of his rheumatism rises and falls, and it is along this line that our theory runs. Urea is the result of the complete oxidation of the proteid food taken into the body. When this process is interrupted a condition of suboxidation occurs with the production of uric acid, an incomplete urea, and when this is carried still further lactic acid results. Of course there is uric acid in any urine but in such quantities as to be kept in solution. It is only when this suboxidation is carried to excess that we find crystals of uric acid in urine and when they are so found continuously and in increasing amounts they indicate a profound disturbance of nutrition and something will surely break down sooner or later. Such conditions more often occur in adults and may result in calcareous degeneration of arterial system, or in Endocarditis or Chronic Intestinal nephritis or a host of minor troubles.

The Uric and Lactic acids combining preferably with Calcium and Sodium are freely deposited in the serous membranes as urates and lactates, giving rise by their irritation to all the symptoms of Acute Rheumatism. Therefore those causes which predispose to a condition of suboxidation predispose to rheumatism. Among these causes, in the first place we may put a sedentary life. Lack of exercise soon causes a deficiency in the circulation, and gradually the different organs get clogged up and cease to functionate properly. Of course under these circumstances the supply of oxygen is not sufficient for the bodily needs. Add to these the common errors in diet and we have the chief causes of rheumatism. It is evident then that rheumatism cannot be truly heredi-

tary but of course children inherit the weak organs of parents; their diet is generally the same and they are exposed to the same surroundings. Very few people use enough water and salt, and these compounds tend to promote the metabolic processes, keep excrementitious products in solution and render elimination easy.

In the presence of large quantities of water, even though uric acid be present in excess, it is kept in solution and eliminated without causing much trouble. It is to this rather than to any inherent virtue in their chemical constituents that we ascribe the benefits arising from the various medicinal spring waters.

Then as to the food we eat: The starches, sugars and fats which supply the animal economy with heat and energy enough for life are all easily oxidized, and it might seem at first sight that their use in any quantity could not possibly be the cause of any suboxidation, but it must be remembered that the articles rich in such materials are correspondingly poor in proteids and if the diet is confined to such materials a very great excess must be taken to get the amount of proteid matter which is absolutely necessary to repair waste.

Therefore, while these starches and fats are easily oxidized, from this very ease they use all the oxygen which should have been expended on the proteids combined with them, and these proteids are consequently left as the unfinished product, Uric Acid.

The same difficulty arises from a diet entirely of proteids, for if the system be deficient in oxygen some unoxidized products will surely remain.

In the treatment of Rheumatism, the first thing to do is to administer a cathartic. Calomel is my favorite, for it not only unloads the bowels of a mass of matter which is otherwise being constantly reabsorbed into the system, but it stimulates the activity of the hepatic cells, giving them more power both to absorb more nutritious material and to sift out more completely the useless products of metabolism and relieve the overworked kidneys. From five to ten grains is a good dose followed by a saline cathartic. At the same time we can begin to relieve the pain and promote the reabsorption of the deposits in the joints. The following is at times very effective:

Rx. Salol.
Ac. Salicylic.
Phenacetin aa dr. ss.
Mx. et ft. Caps No. vi.
Sig—One every 3 hours.

This relieves the pressure on the joints by lessening the congestion and promotes the dissolution of deposits. At the same time it materially reduces the fever and the Phenacetin has a marked and quick effect on the pain. Of course from the depressing effect on the heart this should not be repeated when it can be avoided. I have found very few cases but what would improve on this treatment. The comfort of the patient can be greatly promoted by fixing the joint and keeping it very warm. For a local application the *Oleum Gaultheria* with equal parts of *Ol. Olivae* cannot be excelled.

During this time the patient should be confined to a milk diet rigorously. After the acute symptoms have subsided, or in chronic cases where there has been a fibrinous exudate, I have found great benefit to follow the use of Iodine or some of the alkalies.

The *Syr. Acid. Hydriodic* dr. ii every three hours is very useful. It is pleasant to take, increases secretions and excretions, and helps to absorb deposits and exudates. It has been claimed by Hoig that *Lithia* is counterindicated but it certainly gives very good clinical results in sub-acute cases. But to prevent another attack the patient's living and diet are the important things. In building and nourishing the bodily tissues the proteids are much more necessary than the starches, sugars and fats. Therefore the diet should be proteid in character, and because the animal proteids are more easily oxidized than the vegetable, milk should be selected. As the case progresses favorably the dietary can be enlarged and successively eggs, then meat well done and in small quantity, and finally by the vegetable elements. This is contrary to the old and accepted doctrine which excluded meat. To be sure, on a purely vegetable diet the symptoms improved but the amount of proteid matter absorbed was so small that the bodily nutrition did not improve and the patient never got into a position where he could oxidize what little proteid he did get, because the excess of non-proteid elements took all the oxygen. Then at the least little excess in animal diet the dreaded reaper occurred. At the return of health the diet should incline toward the vegetable though of course excess should be guarded against. Above all a careful watch should be kept on the urine, and when the uric acid crystals appear the diet should be further reduced. This observation can be made without a microscope in a rough way, for if urine is allowed to stand in a flask the excess of uric acid will be deposited on the sides and bottom and can easily be distinguished. Very often, however, the urine is so hyper acid as to keep an excess

of uric acid in solution but they appear very rapidly as the fluid becomes alkaline after standing a few days.

Much might be said about the treatment of muscular rheumatism and gout, but their pathology is much the same and they can be treated on the same general principles.

139 East 28th Street, New York City.

THE ATTENDANCE OF MEDICAL COLLEGES.

By some late statistics the *Journal of the American Medical Association* shows that in 1892 there were over 18,000 medical students in 117 medical colleges in this country. In 1894 in the same colleges there were 21,186 students, an increase in these colleges of 3,186 students during two years. It must be remembered that there was diminished immigration and great depression in trade during this period of two years. It is no wonder physicians complain of hard times. With this increasing wave the outlook for the future is anything but encouraging for doctors, young or old.

Counting three years for each student to become a graduate the number of physicians in the United States would double every fourteen years. This is astounding; at the same time it is a good argument that the colleges adopt the five-year plan.

DISEASES OF THE ALIMENTARY CANAL AND TREATMENT.

INTERNAL AND EXTERNAL HYDROTHERAPY. MEDICATION.

BY JAMES OSBOURN DECOURCY, M. A., M. D., St. Libory, Ill.

Read before the St. Clair County, Ill., Medical Society, June 7, 1894.

Cleanliness is said to be next to godliness—a very old adage which I have found to be no less true in the treatment of all diseases which have come under my observation. It is my custom to first make clean my patient, outside and in-

side so far as practicable, by the free use of pure water and good soap. I have never seen or had a bad result from the use of these agents. I am of the opinion that in many cases all the medicine that is needed is the free, judicious use of water, abstinence from food, plenty of pure air and sunshine.

These agents, together with a clear conception and observation of the laws of hygiene, will figure very conspicuously in the future of medicine.

While I am a strong advocate of the free use of water in the practice of medicine, I also have confidence in the therapeutics of drugs, and as I believe, have seen many good results from the intelligent use of them.

In the treatment of disease there are three distinct steps. They are: 1, a correct diagnosis—ascertaining the cause; 2, absolute cleanliness by irrigation internally and the free use of water externally, and by the use of disinfecting agents; 3, repair the damage—heal the wound—restore nature—rather assist nature in her work of reconstruction. This should be done by the skillful use of the tools best adapted to the work to be done.

In treating diseases of the alimentary canal generally, and in the three following cases which I report to you, I have endeavored to follow the foregoing principles. My results are all that could be desired. They have been both interesting and profitable to me, and I trust they may be of some interest to this Society.

CASE 1.—Miss Mary; aged 29; American; fawn type; medium size and rather stout; was taken at night with pain in lower bowels, followed by watery stools.

I was called in the early morning, March 15. Found her excited and suffering very much pain in the bowels; also complained of severe headache. Temperature was slightly elevated. Pulse regular, but rapid and weak. She gave history of having had several severe attacks of ulcerative colitis, during one of which she came very near to death's door.

There was some tenderness on palpation and percussion over the major part of the abdomen and the bowel was very active in evacuating itself. The stools were thin, and contained mucus with a little blood. When food was taken into the stomach, especially milk, it was usually ejected in curdy masses within a few minutes.

The usual agents were used to abate the pain, to check the vomiting; also to restore the bowel to its normal condition.

The pain was greatly reduced and the rebellious condition of the stomach almost entirely overcome; but the bowel persisted in its active work of draining the system. The stools became offensive, containing more blood and mucus.

A portion of the lining membrane of the intestine about eight inches in length was passed with the feces the fourth day. Having a four ounce bottle of Glycozone, I concluded to try it. So other internal agents were discontinued, and 2-drachm doses of Glycozone given every four hours in a wineglass of water. The bowel was washed out morning and evening with warm soap water, followed by an ounce of tepid water containing a half drachm tinct. opium.

At the end of the first day after beginning the last method of treatment there were marked signs for the better; and the patient expressed herself as feeling less bad. The treatment was continued with constant improvement in the case until the Glycozone was all taken, at which time the bowel and stomach were under

good control. Pain was all gone; and after a few days of convalescence the patient made a perfect recovery without any further treatment.

CASE II.—Ely, aged 32, medium-size man, general health uniformly good; a blacksmith by trade. First saw the case with Dr. S. at 4 P. M., March 30.

On arrival at bedside of patient, I found him in what seemed to be a semi-comatose state. The odor of whiskey was very marked. Examination of the matter ejected showed it to contain blood and mucus.

A few drops of chloroform with cold water were given; and a cold pack placed over the epigastrium to check the vomiting. The following powders were given to quiet the stomach and to move the bowel:

Rx Calomel, gr. viij.
Podophyllin, gr. ij.
Subnitrate of bismuth, gr. xij.
Bicarbonate of soda, gr. iv.

M. Pulvis, No. 4. Sig—Dose, one powder every hour.

The father, mother and wife of the patient gave the following history:

“For the last five years the patient has been drinking whiskey, and for the last two years, in particular, he has been drinking too much. Last October he had an attack somewhat like this, but recovered in about one week.

“His general health has always been good. He has been drinking too much every day for a week now—keeping his whiskey in the shop. He was well this morning. Worked in the shop until noon. Ate a hearty dinner, but was taken sick soon after eating and in a short time began to vomit.”

Called again at 5 P. M. Found him quiet, but suffering. Left some Dover's powders to be given during the night if necessary.

At 2 A. M., March 31, was called again. Found him excited and suffering very much. Quick pulse and slight elevation of temperature. Gave him hypodermatic injection:

Rx Morph. sulph., gr. $\frac{1}{4}$.
Atropin, gr. 1-150.

His wife gave history of his vomiting at irregular periods until 10 P. M., after which time nothing would pass either up or down. Impossible to swallow water. Upon careful inspection the whole mucus membrane lining the mouth and throat as far as could be seen was in a state of hypertrophy. Indeed, it was simply cooked. (Pardon the use of the word, cooked; but it expresses the condition.) The stomach, also, was in a state of inflammation. What was to be done?

Internal medication and alimentation was out of the question. Recognizing the emergency of the case, I determined, if possible, to dissolve the mucus about the affected parts, and to attempt to reduce the œdema of the membranes.

The nose and throat, therefore, were sprayed every twenty minutes for awhile with Hydrozone and a 20 per cent. solution of the same used as a gargle every hour, until he could swallow water, which required forty hours. An enema of warm soap water was given and repeated, which produced a soft stool: and he expressed himself as feeling better.

The spraying of nose and throat, together with the gargle, also the enema, were continued every day. The inability of the patient to swallow made alimen-

tation by the stomach impossible, to say nothing of the inability of the stomach to perform the work of digestion. Boiled milk and warm soups were regularly given in small quantities by the rectum.

On the morning of April 7, the whole lining membrane of the œsophagus was expelled in the attempt to vomit. The membrane was neither broken nor perforated; but was turned inside out. I have preserved the specimen in an alcoholic solution; and take pleasure in presenting it herewith for your inspection and examination.

There was some fever most of the time. The temperature running up as high as 102. The pulse varied from normal to 90, and a few times went up to 100.

The general condition of the patient was fairly good—indeed, much better than could have been expected.

There was very little headache, but a lancinating pain in the left hypogastric region was greatly accelerated by coughing, and there was more or less tendency to cough during the first week.

I might state here parenthetically that, in my judgment, the trouble in the side had no connection with the condition of the mouth, throat and stomach; but, on the contrary, was entirely and wholly independent of it.

The history given of the case showed the last named trouble to have been produced some five years ago by prolonged arduous labor in which the abdominal muscles were in a constant strain for hours. Since which time the trouble has returned at different periods; and almost invariably following protracted, or great straining of the muscles in that region. The treatment given was palliative.

The odor coming from the mouth of the patient was offensive from the first, and continued to grow more and more offensive until after the expulsion of the membrane.

The kidneys performed their work admirably well. The stools which followed the enemata of warm water were rather soft and of a greenish color.

There were no hallucinations, no delirium; and for the most part sleep was good.

To prevent septicemia, to assist nature in the work of reconstruction, as well as to counteract any miasmatic influence that might be present the following preparation was given:

Rx Quininae sulphatis, scruples ij.
Acidi sulphurici aromatici, cc. v.
Aquaë comphoræ,
Aquaë destillatæ, aa, oz. ij.

M. Sig. One dessertspoonful every two hours, being alternated by half drachm doses of Hydrozone, 20 per cent. solution, given in a third or a glass of water.

Gradually, but slowly, the condition of the patient grew better, with the exception of one day, at which time he had no Hydrozone. The other medicine "Would not work without the gargle," as he expressed it: "But worked well together."

Immediately after resuming the use of Hydrozone he began to feel better. Saw him April 9th. Found him in good condition. Pulse and temperature normal. Expressed himself as feeling very well.

He had been sitting up most of the time for several days. I recommended that the treatment should be continued for some time.

A week later his wife called at my office stating that she thought he was doing very well. Since which time I have had no official report from the case.

My candid opinion is, that of all the agents used, the one to which he owes the preservation of his life during the first seven days of the attack is Hydrozone.

CASE III —Bemie, little boy, aged 9 years, orphan, German, was brought to my office May 20. Had diarrhoea which had become chronic. Also had intermittent fever—mild form. He was very much reduced in flesh and emaciated.

Various and numerous agents from the list of ordinary remedies were used during the four succeeding days: but the diarrhoea was growing worse rather than better. The stools became very numerous, the actions amounting to ten or twelve at night with as many more during the day. The malarial fever received appropriate treatment and was readily subdued.

May 26 I planned a new treatment. The patient was thoroughly sponged from head to foot once a day with tepid alkaline water. The bowel was washed out *clean* morning and evening with soap-water, just warm enough to be comfortable to the patient. After the bowel was washed out, 2 ounces of starch water containing 2 drachms of Glycozone was thrown into the rectum, and left to be absorbed. The internal treatment consisted of a milk diet, fresh water to drink impregnated with Hydrozone, and dessertspoonful doses of Glycozone taken every two hours during the day in a wineglassful of fresh water.

Improvement began with this treatment. The skin and bowel were kept thoroughly cleansed every day as well as medicated, the bowel being irrigated twice each day. June 4, the child was reported well. His general health is rapidly improving.

Good or bad, this treatment is purely original with me.

What effected the cure? My answer is this:

1. Removing the cause. This was done by abstinence from all solid food. Aliment was restricted to small quantities of pure, fresh milk, beef and chicken soups, given at regular periods.

2. By cleansing the affected parts, as before stated.

3. By healing the wound. This was done by the use of Glycozone, which I have found to be one of the most reliable and rapidly healing agents that I have yet used. The Hydrozone was used as a disinfecting agent.

May we not reasonably expect that during the remainder of the present decade, and for all time to come, internal as well as external cleanliness shall be to suffering humanity a boon—an heavenly unction.

NOTE.—I have, for some time, substituted Hydrozone in my practice instead of Peroxide of Hydrogen as formerly used.

Hydrozone is "double strength" hydrogen peroxide—so to speak. In other words, it has twice the bactericide power, and, therefore, requires only one-half the quantity to accomplish the same results.

It is not disagreeable to the patient when taken internally, if well diluted with pure fresh water.



UNIVERSITY OF VERMONT.

A REVIEW OF THE ANTITOXINE TREATMENT OF DIPHTHERIA.

The antitoxine treatment during the past few months has taken a tremendous hold on the minds of the entire medical profession. There is an increased interest in diphtheria in all medical circles. This great discovery was not achieved by a single stroke; it was rather the legitimate outcome of a number of discoveries made by prominent scientists working at the same time in the same line. Klebs in 1883 discovered the diphtheric bacillus. Loeffler in 1884 isolated it, described its culture media, inoculated animals and thus reproduced diphtheric membranes. This gives the bacillus the name Klebs-Loeffler bacillus. In 1888 Roux and Yersin by means of the Chamberland filter separated the bacillus from the ptomaines or toxine. They then injected this toxine into animals and produced typical diphtheric paralysis, and in this way demonstrated clearly the role of this bacillus.

Dr. Behring experimenting with Roux's toxine in 1890, found that blood of animals that had been injected with this toxine, contained *antitoxine*. He then succeeded in producing in animals immunity against diphtheria. Soon after numerous experiments were made and reported.

This great discovery was not, however, at that time utilized to any great extent. Roux then in a most practical and enthusiastic way continued the experiments. He inoculated a horse with toxine and bacilli, and thus obtained serum in quantities large enough to treat many small animals before and after they had been given diphtheria. The results were satisfactory and he immediately commenced with diphtheritic children.

In the latter part of last year he made a report of his first 448 cases of diphtheria treated with antitoxine, with a mortality of 24 per cent. This report attracted the attention of the entire medical world. Before this report was made, however, many other eminent physicians, and especially in Berlin, had been treating cases with the serum, but had not made any report publicly. After Roux made his report they connectively made a report of 350 cases with more favorable results than had already been claimed.

The most reliable reports from Vienna have been made by Wiederhoffer and Monti. The former treated 64 cases with six deaths and several of them were of an unusual severe type. Monti treated sixteen cases without a single death.

In Paris the enthusiasm over the serum treatment is certainly very great. The last report of 231 cases gave a mortality of only 10 per cent. This is much better than Roux's original 448 cases with a mortality of 24 per cent. This lowering of the mortality seems to go hand and hand with the improvements in the details of the preparation of the serum and its administration, and with a better appreciation of the indications for its use.

Dr. Caillou also in Paris, treated in his private practice, 21 adults with only one death. He used smaller quantities of serum than he usually employed for

children, because as he said, adults stand diphtheria better than children and are not so profoundly poisoned by it.

In Germany Prof. Witthauer reports a series of 50 cases of diphtheria treated by him since October, 1894. Of these 36 were treated with serum; of this number five, or 13.9 per cent., died; in four of the fatal cases tracheotomy was performed. In 20 of the children who were injected tracheotomy was required, so that the mortality after the operation was 20 per cent. All the cases, both those treated with and those treated without serum, taken together gave a mortality of not quite 14 per cent. This Witthauer considers a brilliant result having regard to the fact that in 28, that is more than half the total number of cases, tracheotomy was required, and that the majority of the cases came under treatment at rather a late period after the commencement of the illness. In former years, of cases in which tracheotomy was performed in the same institution, not more than 25 per cent. recovered. Witthauer believes that recent cases of uncomplicated diphtheria will as a rule recover after the injections. Albuminuria was slight and infrequent, certainly not more frequent than before the serum period. Eruptions of the type of erythema exudativum occurred in two cases. The value of Witthauer's statistics is lessened by the fact that no bacteriological examination was made.—*The Charlotte Medical Journal*.

OBJECTIONS TO THE ANTITOXINE TREATMENT OF DIPHTHERIA.

Dr. Samuel T. Armstrong, of New York, sends the following suggestive communication to the *New York Medical Journal* of April 13, 1895, respecting the criticisms made upon the antitoxine treatment of diphtheria:

Those that heard Dr. Winters's very comprehensive criticism of the value of antitoxine serum in diphtheria, at the meeting of the Academy of Medicine on the 4th inst., can not but feel that an important factor has been overlooked in the consideration of the treatment of diphtheria with this substance; and that factor is the globulicidal power of an alien serum on the blood of an animal into which it is injected.

In a monograph on *Transfusion of the Blood*, published in 1875, L. Landois reported that the serum of the dog, the horse, or the rabbit dissolved the red globules of other animals with great rapidity; and in the last edition of Professor Stirling's translation of Landois's *Physiology* there is the statement that, if the serum of one animal is transfused into an animal of another species, the blood-corpuscles of the recipient are dissolved, and if there is a general dissolution of the corpuscles death may occur.

Dr. G. Daremberg (*Archives de Médecine*, 1892) stated that his experiments showed that, while the serum of an animal of one species did not destroy the corpuscles of an animal of the same species, it rapidly destroyed the corpuscles of

another species. If warmed to from 122° to 140° F., or exposed to the light for several days, the serum lost this globulicidal power.

G. Hayem, in his monograph on *The Blood*, states that the serum of the ox more or less profoundly changes the blood of the dog, producing in it small emboli that may involve the functions of organs or even life itself. Microscopically, these emboli consist of degenerated elements of the blood, the hematoblasts and the red and white corpuscles being altered by the serum. He specifically states that horse's serum produces phenomena similar to those caused by the ox's serum. He further states that the urine is habitually suppressed and the kidneys are congested.

The tendency of alien serum to produce emboli has also been noted by C. Lazet (*La France Méd.*, 1891), who found that if the serum of a dog was mixed with the blood of a man, or *vice versa*, there were produced more or less pronounced alterations, and solid concretions were formed from the metamorphosed elements.

The undersigned believes that it was this tendency of alien serum to form emboli that caused the death of the seventeen-year-old girl in Brooklyn. And this toxic influence of serum *per se* explains all the unusual and untoward phenomena that has been reported in diphtheria patients treated by antitoxine serum. The post-mortem lesions found in the five-year-old child whose history is reported in the *British Medical Journal* for March 30th, correspond throughout with those observed by Hayem in dogs that died from the effects of alien serum injections, though the animals were given forty times as much serum as the human being.

Empiricism that has bacteriology as its sole foundation is as condemnable as any other form of that cult. and, as prognosis is not yet a lost art, it seems absurd that the medical profession should accept the dictum that all persons whose nasal or faucial secretions contain the Klebs-Loeffler bacilli should be injected with antitoxine serum. There are many recorded instances in which the bacilli have been found in the secretions of healthy individuals, and there are some recorded instances in which these bacilli have not been found in patients who clinically presented the phenomena of the disease, even to the secondary paralysis.

While antitoxine serum has probably a field of usefulness, it is evident that nice discrimination is necessary to designate wherein it lies.—*The Therapist*.

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EDITORIALS.

Apropos to the recent articles appearing in one of our leading literary magazines, concerning the "age of consent" law, we take this time and opportunity to say a few words.

The subject is one of importance not only from the side of legal medicine, but of humanity itself. It seems remarkable that we, who to-day pride ourself on our development both socially and spiritually, should tolerate such laws on our statutes. But such is the case.

We believe that this question may be considered in two ways, and but two, the physical, and, for lack of a better word, the moral.

The physical side is out of man's jurisdiction entirely. Nature herself has settled this matter, and the written law can neither alter nor improve. The period commonly known as "puberty" at which the physical girl becomes the physical woman, with the liability of motherhood suddenly thrust upon her, is Nature's "age of consent." But life for us is necessarily something more than simple physical living. The de-

velopment of the *ego* has established the true relations of mankind. It has given us the sacredness of the home and family, which we must keep inviolate. And we will.

No one of sound judgment would ascribe to the embryonic woman powers of reason sufficient to choose for herself in matters temporal or spiritual. If this is granted, then must we recognize her susceptibility to outside influences, and cope with *them*. It cannot be done by simply determining the period at which she is capable of asserting her individuality, for our social system is defective and development is necessarily varied.

But we can protect all women and give to them such protection as their lives and conditions may demand. *Make seduction a crime, at any age*, if seduction can be proved !

Let the facts speak for themselves and cast away this abominable law of "consent," which for years has been the mighty cloak of the foulest kind of criminal seduction !

Another thought suggested in the light of recent disclosures, is that we are forgetting our boys in this crusade for virtue's sake. We have overlooked the fact that our sons claim the right to our protection just as much as our daughters. Their souls and bodies are in every way to be kept as spotless, and their degradation will prove as great a shame.

In the name of Heaven, let us awake to the damages of the hour, and strike for our homes. Let all thoughts of sex go. Sex is only a circumstance of birth. It is all humanity we must protect, made up of human beings with souls to save, for, far more to be dreaded than the fearful pestilence of disease, is the onslaught of these sexual parasites.

A quarantine must be established, isolation declared imperative, and society thoroughly fumigated, e'er the scourge will pass. Then must means be taken to prevent a recurrence at some future day.

Good reports are still coming in concerning the value of Antitoxine, and the general consensus of opinion seems to be that medicine has witnessed a grand victory of Science over Disease.

MEDICAL ABSTRACTS.

RELATIVE VALUE OF MERCURY AND IODIDE OF POTASH IN THE TREATMENT OF OCULAR SYPHILIS.—Chibret (*Annales d'Oculistique*) says :

1. In ocular syphilis, mercury alone almost always produces results ; iodide alone, never.

2. In general syphilis mercury alone almost always produces results and upon all the manifestations of syphilis ; iodide alone only upon certain manifestations and in an inconstant manner.

3. In both ocular and general syphilis, mercury alone can serve as a diagnostic test.

4. Mercury, the only specific for syphilis, is, at the same time, a systemic poison, affecting especially the nervous system.

5. Potassium iodide, as a counter-poison to mercury, is frequently indicated either to eliminate or to cause toleration of mercury.

6. The iodide acts on the lymphatic and the rheumatic manifestations.

7. "Syphilis grave" is affected only by mercury alone, or in combination with the iodide.

CHLOROFORM AS A TAPE WORM REMEDY.—Dr. Stephen, *Ell Raccogitore Medico*, has recently confirmed the action of the chloroform as a tenicide, he having been able to expel tape worms with this remedy which had resisted all other measures. He employs Thompson's formula :

Rx Pure chloroform, grm. iv.

Syr. simp., grm. .03

M. Sig—To be taken in four doses at seven, nine, eleven and at one in the afternoon. At noon take an ounce of castor oil.

All his patients bore the chloroform well, and it was even administered to children in proper proportions.—*Canada Lancet*.

SUBSTITUTION.—(J. G. Bellrose, Burlington, Vt., in *Pharmaceutical Era*). I do not believe that the great evil is practiced to such an extent as the manufacturer or chemist would lead you or the public to believe. However, I do not doubt that the evil is practiced to a great extent in many localities, especially in the smaller towns or villages having no wholesale house at their command. But this should be no excuse whatever. This evil should be stamped out entirely. In my opinion, the manufacturer or chemist is as much at fault as the druggist in this evil of substi-

tution. If the manufacturer would sample the druggist as well as the physician with their new products, or let him know in some general way that they intend to do so in his immediate vicinity, etc., then the druggist could place himself in a position to meet any emergency. As it is, the average druggist knows nothing of these many new articles until he is confronted with a prescription, and rather than consult the physician (who would nine times out of ten make the change) these unscrupulous fellows will take it upon themselves to substitute. The country is so thoroughly flooded with these new chemical or pharmaceutical preparations that it is impossible for the average country druggist to keep posted, or even attempt to keep all these new articles in stock, consequently follows the evil. On the other hand, every pharmacist in the country should take one or more of the many pharmaceutical journals, which are always in close touch and in sympathy with the pharmacists of the country, with the aim of keeping them posted upon all the new chemicals and pharmaceutical preparations. I do not believe that substitution is practiced in our own city or vicinity, and feel proud in saying that Burlington has as good pharmacists as can be found anywhere in the United States, men of reputation and long experience in pharmacy.

A CURIOUS CASE OF CARBOLIC ACID POISONING.—(*London Lancet*, March 2, 1895). A nurse had been directed to clean a child's head with carbolic oil; after rubbing for three minutes she discovered she had been using pure carbolic acid. The head was promptly washed, but within five minutes the child lost consciousness. It remained so for five hours when two ounces of olive-green colored urine was passed. The return to consciousness was very gradual, the child (three years of age) having for several hours a dazed appearance. At the end of three days the urine became normal, and the trace of albumen disappeared. Seeing the frequency with which carbolic acid is used it is worthy to notice in this case the rapid absorption by the unbroken skin.

URINATION AFTER LABOP.—(Dr. N. Recht, *Rev. Internationale de Bibliog. Med.*) in a thesis has made a study of micturition in the lying-in period. He comes to the following conclusions.

1. Urination after labor, in the majority of cases, follows spontaneously.
 2. Catheterization is but exceptionally required; if it be necessary, it should be deferred as long as possible.
 3. It is only indicated when the bladder assumes abnormal proportions, or if retention occurs.
 4. Catheterization is liable to occasion two evils—cystitis, in spite of all precautions, and dependence of the bladder for a time upon the catheter.
-

A CASE OF CÆSAREAN SECTION.—(George Haven, M. D., *Boston Medical and Surgical Journal*, Feb. 9.) reports an operation performed on a woman.

thirty years old, of slight build, weighing about one hundred pounds. She was pregnant for the third time. Her first pregnancy was terminated by craniotomy; the second by a difficult version subsequent to high forceps. Result in both cases was a still-birth. Measurement of the true conjugate was $2\frac{1}{2}$ inches. The alternative of craniotomy was Cæsarean Section. She was prepared for the operation, and at 11:15 A. M., was given ether, and at 11:30 was on the table. Baby delivered at 11:39. Patient in bed 12:35. The wall of abdomen was about $\frac{1}{2}$ inch thick. The bleeding from uterus was very slight. A subcutaneous injection of ergotine was given, and at night an enema of potassium bromide. Baby was nursed from beginning. Mother was up in three weeks, and left hospital in four weeks. Pulse never above 100. A short time ago she was well and had a fine healthy son. Baby's initial weight was eight pounds.

RUPTURE OF THE MALE BLADDER SUCCESSFULLY TREATED BY ABDOMINAL SECTION AND SUTURE.—James Murphy, M. D. (Brit. Med. Jour., 1894, Nov. 3, p. 978). On May 28, 1894, the patient, 24 years old, and in good health, while the bladder was full of urine, was knocked down by a runaway horse; admitted to hospital and seen by M. about two hours after accident; had not much pain, nor was he much collapsed. Externally there was abrasion of penis and lower portion of abdomen; a catheter passed into bladder drew off half an ounce blood-stained urine; ten ounces of boric acid solution was injected, and only one ounce recovered. Percussion gave resonance over bladder and dullness in both flanks; on left side a splash could be obtained. Diagnosis: Rupture of bladder. Abdomen opened in median line, and forty ounces of fluid were removed from peritoneum, and peritoneum washed out. There was a smooth tear from front to back over entire fundus of bladder, extending a little beyond peritoneum in either direction. On either side of the tear, the peritoneum was stripped up by the surgeon for one-quarter of an inch; a series of sutures were passed through the muscular coat on either side of tear, inside the line where the peritoneum had been stripped up, the needle passing down to, but not through, the mucus coat. The sutures were tied, and ten ounces of boric acid solution was injected into bladder, which proved to be water tight. Peritoneum was sutured over the rupture, and washed out, and a glass drainage tube passed down into the pelvis, and the abdominal wound sutured. A No. 10 (E) catheter was passed into the bladder and secured, after putting patient to bed; to this was attached a rubber tubing running under patient's thigh, which had been raised on two pads. The end of the tubing was placed in a large bottle beneath the bed, so that the nurse could see whether urine was flowing.

Fifty to seventy ounces of urine were passed daily, blood-stained for thirty-six hours. The glass tube was removed from abdomen after forty-eight hours. The catheter was removed after eighth day; patient was catheterized for two days, and for five days made to pass urine every three hours while awake. He was kept in bed for two weeks, and discharged cured in four weeks. He then

had a bladder capacity of at least twenty ounces. The only complication was a slight urethritis.

The author makes the following remarks concerning the case ; It was fortunate that the patient was seen within two hours after accident—the diagnosis was made certain ; the method of suture was used because the tear was clean and the bladder thick and muscular ; draining the bladder continuously to keep sutured surface at rest, and then dilating bladder gradually at the end of a week by allowing urine to accumulate in small amount were important.

HOW SHOULD THE SURGEON CLEAN HIS HANDS ?—In Germany the usual method for surgeons to clean their hands is that of Furbinger. It consists in brushing the hands and nails with soap and hot water, then dipping them in an eighty per cent. alcohol solution, and finally washing with a two per cent. sublimate of mercury, each part of this proceeding to last one minute. Recently Reinecke, of Leipzig, has asserted that a sure disinfection of the hands may be obtained by rubbing them with alcohol only and washing afterward with pure sterilized water. The alcohol owes its power to its action in dissolving the sebaceous substance on the surface of the skin, and enabling the bacteria which adhere to it to be easily washed away. Instead of brushes, which are difficult to clean and which irritate the hands, he recommends loofah sponges. Another reformer in this matter is Dr. Schleich, who rejects all brushing, and only washes the hands with a soap invented by himself, which consists of domestic soap (one part), marble powder (three parts), and lysol (four per cent. of the whole). This soap is said to clean less by chemical than by mechanical means, the fine marble powder penetrating into all the folds of the skin and rubbing away all dirt and detritus—*Medical Record.*

NEWS NOTES AND FORMULA.

We note with regret that Dr. J. F. Haller, has resigned from the head of the Editorial Board of the *Atlantic Medical Weekly*. Dr. Haller is an able man and one who has done much for medical journalism in Rhode Island.

INFLUENZA.—In influenza Dr. Pepper prescribes the following :

Rx Quininae Sulph., dr. j
Pulv. digitalis, gr. xx.
Pulv. scillae, gr. xx.
Ext. opii, gr. v.
Ext. glycyrrhizae, qs.
Misce. et ft pill No. xxx.
Sig—Take a pill four times daily.

As meeting the several indications in ordinary "grip" for the fever and pain he uses antipyrine or phenacetine in grains iij doses *with caution*. All drugs of this class are to be carefully used in influenza.—*The Medical World*.

CRISES OF DISEASE.—Acute diseases come to the crisis in fourteen days ; the fourth day is the indicator of the seventh ; the eighth is the commencement of the second week. The eleventh day should likewise be attended to, for it is the fourth of the second week ; we should, also, remark the seventeenth day, for it is the fourth from the fourteenth, and the seventh from the eleventh.—*Med. Brief*.

ENLARGED TONSILS.—Five or ten minims of ergot, injected into a hypertrophied tonsil, does away with the necessity of employing the tonsillotome—causes the enlargement to recede.—*Ex*.

SKIN DISEASES.—Familiar appellations for skin diseases are not confined to the laity. The most diverse, ridiculous and unmeaning terms have been applied to these affections, such as tetter, that usually refers to eczema, or may mean psoriasis or lupus. Baker's itch, grocers' itch, milk crust, tooth rash, are also used to designate some form of eczema.

Liver spots may refer to chloasma, a pigmentary affection, or to tinea versicolor, a vegetable parasitic disease.

The itch, to scabies, a disease caused by an animal parasite, known as the *acarus scabiei*. The expression, army itch, would lead one to suppose that it was distinct from scabies, yet we recognize it as the same disease.

Blood boil has no scientific meaning and is applied to various diseases.

Hives is recognized by some as urticaria; by others as varicella (chicken-pox).

Shingles means herpes zoster, an acute disease, characterized by an eruption of groups of vesicles upon an inflamed base along the course of certain nerves.

Prickly heat usually refers to a disease known as miliaria, an affection of the sweat glands.

Dandruff, to the dry form of seborrhea of the scalp.

Black-heads (flesh-worms), to comedo, a collection of sebaceous matter in the distended sebaceous glands. The little black-heads are caused by the accumulation of dust and pigment.

Ringworm is a vegetable parasitic disease, caused by the trichophyton fungus, and is known as trichophytosis.

Barbers' itch is caused by this same fungus upon the bearded portion of the face, and is designated by the term tinea sycosis.

Fish skin disease is a congenital affection characterized by dryness and scaling of the skin. Its proper name is ichthyosis.

Chap is usually a mild form of eczema, attended with cracking of the skin — *The Medical Brief*.

ACUTE DIARRHOEA.

R Bis. subnitratis, drams js.

Hydrarg. cum. creta, grains viij.

Opii pulv. (if pain), grains iv.

Acidi carbolici, gtts xii.

Misce. Et. ft. Chartas No. viii.—*Ex.*

WILLIAM C. WILE, A. M., M. D., LL. D.—One of the great universities has lately conferred upon Dr. William C. Wile, of Danbury, Conn., the title of LL. D. This is a worthy compliment from a very high source upon a physician of distinguished ability. No one in the profession in the United States has labored more earnestly for its advancement than Dr. Wile. His genial nature has made him a friend of thousands in the profession, and we voice the sentiment of all who know him, when we extend to him hearty congratulations for this, his latest distinguished honor. May he live long to serve the profession in the able and dignified way that he does for many years to come.—*Mathew's Medical Quarterly*.

We heartily echo the above, for Dr. Wile is a man deserving in every way this great honor. It may prove interesting to know that one of the first letters of encouragement and good will for our MONTHLY came from Dr. Wile. It showed him in his true light, a man absolutely free from the petty jealousy and narrow prejudice of many others vastly inferior to him.

The addition of a small amount of sugar greatly increases the solubility of borax. It will also rapidly liquify a solution of gum arabic which has become gelatinous from the presence of borax.

REASONS WHY THE ABDOMINAL BANDAGE SHOULD NOT BE USED AFTER LABOR.—1. It is unnatural. 2. It is liable to become soiled and hence a harbor for microbes. 3. It increases irritation of the tired and overworked abdominal organs. 4. It interferes with the necessity of frequent antiseptic ablutions. 5. It is difficult to keep in place unless made to order. 6. It binds down the weak uterus and promotes the return of a displacement or a subinvolution. 7. It predisposes to puerperal and cerebro-spinal centres. 8. It increases rather than diminishes the danger of post-partum hemorrhage. 9. It prevents digestion, assimilation and intestinal peristalsis, and tends to bladder trouble. 10. It is unsafe to apply it by anyone except the accoucheur or an experienced nurse.—*Ex.*

DOUBLE PAY FOR TWINS.—A man in Ohio was arrested not long ago at the instance of a woman who claimed that he was the father of the unborn child. He was released on payment of \$300. But when the time came it was found that there were twins, and the poor man was arrested again, and the penalty for his misdoing was promptly doubled by a sympathetic jury.—*Medical Record.*

A SUMMER CAMP.—Dr. L. J. Cooke, the popular physical director of the Burlington Y. M. C. A., is to conduct a summer camp for boys at Keelers Bay, Grand Isle. The situation is admirable for the camp and the hygienic conditions are perfect. This matter of summer outings for boys is one of importance to parents who realize that a change is desirous for the best health of their sons. And so we believe that under Dr. Cooke's able control that his camp will prove of inestimable help to those boys whom school life or close application to study have made anemic or deficient in normal vigor. While cost is scarcely a consideration when best results are desired, we are positive that the expense of a sojourn at the camp will prove within the reach of all. Gymnastics and such sports as are desirable will be engaged in under Dr. Cooke's leadership.

RHEUMATIC JOINTS.—An ointment for rheumatic joints is as follows:

R Salicylic acid.
Lanolin,
Ol. turpentine, aa dr. iij,
Lard, oz. iij.

On application of this salve Bourget claims that the pain is rapidly diminished, and also thinks some of the salicylic is absorbed.—*Ex.*

REMOVAL OF WARTS.—M. Palm (*Semaine Medicale*) recommends the following:

R Trichloracetic acid, grms 9.0.
Alcohol, grms 1.0.
Sig—Apply to the wart once daily.

Or

R Salicylic acid
Lactic acid, aa grms 5.0.
Flexible collodion, grms 10.

Sig—Apply twice daily with a brush.—*International Journal of Surgery.*

THERAPEUTICAL NOTES.

SALICYLIC ACID is highly recommended as an application to ringworm. It may be used as an ointment, but is much better as a saturated solution in collodion. One application is often all that is necessary to effect a cure, but it may be repeated if necessary. The pain caused is not unusually severe.

ALL nervous manifestations in rachitic children are strikingly relieved by phosphorus in medicinal doses.

THE oil of eucalyptus is very efficacious in headache, especially when it is rheumatic or malarial in character.

DIGITALIS should not be given during a high fever, because the heightened temperature prevents its action.

FLUID extract of jaborandi, five to ten drops three times daily will abort whooping cough.

BOOK REVIEWS.

The International Medical Annual, 1895, 645 pp. Published by E. B. Treat, 5 Cooper Union, N. Y. Price \$2.75.

This work, just published, is one of inestimable value. Its compilation shows unlimited energy and a most worthy desire to place before the medical profession the progress of the year. Its success is apparent long before the reader has had an opportunity to fully realize its scope and completeness.

It is a whole library in itself and the separate articles by men long recognized as authorities in the profession, only adds to its usefulness. No physician can fail to appreciate its merit, for as his time is necessarily limited, anything to shorten his labors will be gladly welcomed. It is concise, yet thorough, condensed, though adequate and up to date in every particular from beginning to end.

It is works like the above which give medicine an impetus to greater achievements, and provide for the tired practitioner a change of thought and ideas, which so many of us need.

A Treatise on the Wine of Cod Liver Oil with Peptonate of Iron. By Frederick Stearns & Co., Detroit, Mich.

A small pamphlet issued by Frederick Stearns & Co., containing the opinions and endorsement of the medical profession for their preparation called Wine of Cod Liver Oil with Peptonate of Iron. It is very interesting and the above firm should take much pride in being able to send forth such a publication.

Moullin's Treatise on Surgery. Edited by John B. Hamilton, M. D., L. L. D. Published by P. Blakiston, Son & Co., Phila., Penn.

This work is the finest treatise on Surgery that we have ever seen. The writer is conservative, though thoroughly alive to the progress of the day, and his descriptions and language are above criticism. It is modern from every standpoint and the subject of treatment ably dealt with, greatly increases the value of the work. The drawings are superb and are 600 or over in number. The text is clear and the workmanship fine. Practical ideas give force to the various subjects treated, while the theoretical side is submitted in certainly a liberal spirit.

Through the publishers we understand that this work is recommended by Professor Phelps as a surgical text book. There is no doubt about its admirable fitness for student use, but we go still further and recommend it to every physi-

cian desiring to obtain a most excellent work on modern surgery. Consulted every day it will prove a valuable compendium to any surgeon.

All those interested in its preparation deserve the hearty commendation of the profession.

Mr. Naylor, of the U. V. M., Medical College, is agent for this reliable firm's books and they can be obtained from him.

We have received a number of other valuable books from P. Blakiston, Son & Co., which we will review at length in the May number.

PUBLISHER'S DEPARTMENT.

REPORT OF A CASE OF ANEMIA.

By OLIVER P. BARBER, M. D., Saginaw, West Side, Michigan. Gynecologist to Saginaw General Infirmary ; Surgeon to Michigan Central Railroad ; President of the United States Pension Board of Medical Examiners, Etc.

The following case of anemia in a patient of inherited tuberculous diathesis yielded so rapidly to a form of treatment which was practically new to me that I feel justified in reporting it for the benefit of those practitioners who have not yet made the experiment :

Miss A. B., aged eighteen years : attending high school : father died of phthisis pulmonalis shortly before her birth. The case came under my charge September 15, last, in an aggravated anemic condition, characterized by suppression of the menses, grave intestinal disturbance, tympanitic and prospective phthisis abdominalis. In addition to gastric catarrh, she had a hacking cough, myalgic pains in the chest walls, an afternoon temperature of 102° to 104° , a rapid and weak pulse.

She had been confined to her bed for several weeks before I was called in. For two weeks I used the treatment usually prescribed in such cases, but without satisfactory results, and I had little hope of her recovery. As a dernier resort, I sent her by way of experiment a sample bottle of Wine of Cod Liver Oil (Stearns) with instructions to follow the directions given on the label. A decided improvement was manifested within a few days. Her appetite improved, assimilation of food became normal, the gastric catarrh disappeared, color returned to her cheeks and her weight increased. I had no previous experience with the Wine of Cod Liver Oil, but as no other medicine was administered in this case, it must be credited with the remarkable results attained. The condition of the digestive functions was such that no emulsion or other ordinary preparation of the oil could have been administered.—*Physician and Surgeon.*

A PLEASANT RESORT.

For the invalid seeking rest and quiet, together with a nice home, there is no place better adapted to his or her needs than the Lake View Retreat. Its situation is perfect, overlooking the beautiful Lake Champlain and presenting an excellent view of both the Adirondacks and the Green Mountains.

Amusements are in abundance for those who desire to avail themselves of them, and with the excellent view, fine air, good food, and the attendance of able physicians, it surely is an ideal place to rest and recuperate.

Physicians before sending patients away for the summer should consider the facilities of Lake View Retreat, Burlington, Vt.

FROM THE BUFFALO MEDICAL AND SURGICAL JOURNAL,
DECEMBER, 1894.

Dr. Seneca D. Powell, Professor of Clinical Surgery in the New York Post Graduate Medical School and Hospital, at a recent clinic, in speaking of the treatment of syphilis, said: "The Maltine Manufacturing Company have recently added another valuable preparation to their list, Maltine with Coca Wine. It is especially indicated in cases where the general condition is below par and a tonic without too much alcohol is needed. I have also been using it in old people who are not especially ill, but are feeble and debilitated in the afternoon. It seems to pick them up and is not followed by the usual reaction of alcoholic stimulants. You will find a fruitful field for its use in children of low vitality, who are poor starch digestors, and in convalescence from wasting diseases and exhaustive operations."

WALTER W. S. CORRY, M. D., L. R. C. S., I. & C. ROSE-
DALE ABBEY, PICKERING, YORKSHIRE,
ENGLAND, WRITES :

I have used IODIA, and am satisfied that it is a very powerful alterative, and a great improvement on the old combination of iodide of potassium and sarsaparilla, the later drug itself being most doubtful in its effects, while the preparation is valuable also as a diuretic, a thing of no small consideration in most of the diseases in which it is indicated.

Now is the time of year to make a practice of taking a good Turkish bath at least once a week. It will prove a delightful aid in keeping cool. The prices are reasonable at Sparhawk's Sanatorium, Burlington, Vt.

Doctor:—Do you intend to use Antitoxin in your next case of diphtheria? It can readily be obtained at R. B. Stearns & Co's.

Be sure and specify that you want Parke, Davis & Co.'s Antitoxin.

The "National Life" of Montpelier offers insurance which you may depend upon for fair dealing and security.

Lactated Food is a pure food and its value for infant use is unexcelled by any other.

Diphtheria Antitoxin.

**A Strictly Reliable Serum Prepared after the
Method of Behring and Roux.**

Inasmuch as the Antitoxic Serum produced in our Bacteriological Department will not be available until April or May, we have perfected arrangements for a supply of **DIPHTHERIA ANTITOXIN** prepared under the supervision of **Ira Van Gieson, M. D., and Nelson L. Deming, M. D.,** the well known bacteriological experts of New York City, and issued under their certificate of quality and strength.

This Antitoxin conforms to the conditions of the ordinance of the Board of Health of New York City, is absolutely sterile, and will be supplied in vials of 10 Cc. each.

Three grades of strength will be furnished.

1. A weaker serum which will contain 600 antitoxin units for immunizing purposes and for the treatment of mild cases. Issued under **blue label**; price per vial \$1.90, strictly net cash.

2. A stronger serum of 1000 antitoxin units for curative purposes—of sufficient strength for the great majority of cases. Issued under **yellow label**; price per vial, \$3.50, strictly net cash.

3. A still stronger serum of 1500 antitoxin units for exceptionally severe cases. Of this strongest grade our supply for the present will be limited. Issued under **green label**; price per vial, \$5.25, strictly net cash.

Orders may be sent to our Detroit address; our New York City office at 90 Maiden Lane; our branch at 1008 Broadway, Kansas City, Mo.; or our laboratory at Walkerville, Ont.

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1. A Course in Civil and Sanitary Engineering.
2. A Course in Theoretical and Applied Chemistry.
3. A Course in Agriculture.
4. A Course in Mechanic Arts.
5. A Course in Electrical Engineering.

Candidates may be admitted without examination if they bring certificates from reputable Preparatory Schools whose courses of study fully meet the requirements for admission, but students so admitted are on probation during the first year.

A Course preparatory to the study of Medicine, embracing from two to three years, is offered, the particulars of which will be furnished on application.

All the courses in the Academic and Scientific Departments are open to young women upon the same conditions as to young men. The young women are required to room and board in private families approved by the Faculty.

Scholarships, cancelling tuition, have been established for the benefit of young men of limited means, in the Academical Department.

The University enjoys unusual facilities for securing employment for students in the Engineering Department, both during the course and after its completion.

M. H. BUCKHAM,

President.

Burlington, Vt.

Doctor:

If your time is limited detach the lower half of this page, place it in an envelope with a dollar bill and send it to the editor. You will receive the MONTHLY for one year.

TO H. EDWIN LEWIS,
BURLINGTON, VT.

Enclosed find \$1.00 for which you will send me the VERMONT MEDICAL MONTHLY to address below for one year.

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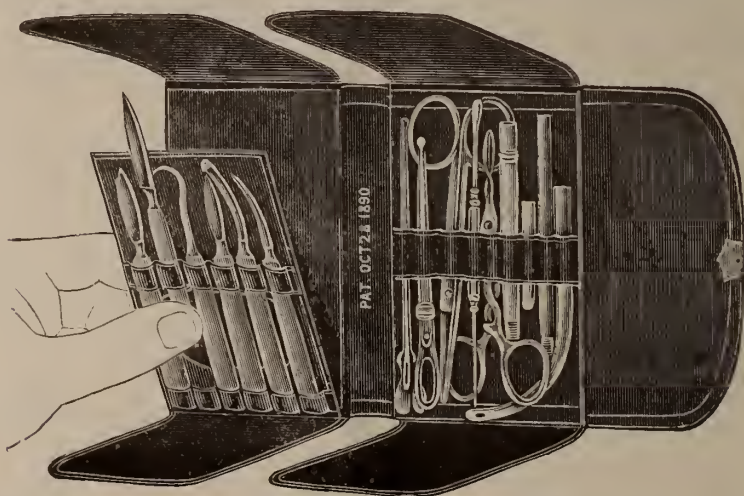
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SURGICAL TREATMENT OF UTERINE NEOPLASMS.*

By J. C. IRISH, M. D., Lowell Mass.

Passing hastily in review the progress that has been made in the radical treatment of uterine tumors, both benign and malignant, we find ourselves recalling the history of abdominal surgery mainly for the last decade. It is true that before this time a few abdominal surgeons would now and then remove an immense uterine myoma in some desperate case in which there was no alternative. The fatality of these operations was necessarily great; they were done in too advanced a stage of the disease, when time had surrounded the growth with every possible complication. There were also efforts in establishing an operation that will always be formidable and often difficult to do.

Therefore, at that time, ten years ago, with a fatality approaching fifty per cent., hysterectomy received very little favor or encouragement from the profession at large. But since this prehistoric period of the operation, if I may so call it, abdominal hysterectomy has been applied to a larger range of cases of uterine fibroids and has been done earlier. The technique of the operation also has been constantly improved. For these reasons the marvelous result was attained of reducing the necessary fatality of supravaginal hysterectomy in six years, or up to 1890, from fifty to ten per cent. While the radical treatment of benign uterine neoplasms was thus rapidly advancing and replacing varied and useless palliative measures, another method of removing the

* This article appeared in the "American Gynecological and Obstetrical Journal," but as it was read at the last annual meeting of the Vermont State Medical Society, we reproduce it.

uterus, directed to the cure of cancer at the neck, was added. Vaginal hysterectomy in comparison with the supravaginal encountered at first very little opposition. In fact, as soon as experience and practice in removing the uterus by the vagina had cleared away the many difficulties that beset the early operations, and perfected a technique at once uniform and practicable, the operation was welcomed as one of great promise, which it has since partially fulfilled. Vaginal hysterectomy, that has done so much already, and in the future will do much more, in saving women from an absolutely fatal disease, had also to a certain extent its period of failure and disaster. The reason for this is at once apparent. The only surgical treatment of cancer in this locality that had before been attempted was amputation of the cervix more or less high, which had been so dismal a failure that the new operation was eagerly welcomed by both surgeon and patient. Consequently most cases of cancer of the cervix that came along were operated upon without much regard as to the extent of the disease. Really, the many disasters and the very considerable fatality of these first hysterectomies were mainly due not so much to a technique not yet perfected as to the fact that in many cases the disease had involved surrounding structures or was complicated by tumors of the body of the uterus or ovaries. But as experience has gradually taught us to avoid operation as hopeless in cases of advanced disease, where the vagina and broad ligaments are involved, and to substitute another operation where other complications exist, the immediate death-rate of the operation has descended to probably less than five per cent.

Thus, one of the two surgical resources at our command for the treatment of malignant neoplasms at the neck of the uterus is being constantly more and more restricted in its application, while, in sharp contrast, our operation for the treatment of benign neoplasms—namely, supravaginal hysterectomy—is being resorted to in a constantly enlarging class of cases.

Following still further the history of our progress in the surgical treatment of these growths of the uterus, we have next to mention not an operation, but an appliance, and that is the Trendelenburg table. This came into general use only about two years ago, and its introduction marks an epoch of progress in abdominal surgery more important, possibly than any single operation that has recently been devised. At first thought it would hardly seem that the position of the patient on whom we were operating would be a matter of very vital consequence;

one would think that we could almost as well remove these tumors in the pelvis' in a horizontal position as in the inclined one of the Trendelenburg posture.

But, as a matter of fact, with a fairly long abdominal incision, which can be extended to the pubis, because the bladder recedes from the anterior surface of the abdomen, and with a broad retractor separating widely the recti muscles, and with the intestines out of the way in the large abdominal cavity, the entire contents of the pelvis are within our view and reach. Dr. Sutton says: "Two years of experience with this posture have taught me that there is scarcely a limit to the possibilities of intrapelvic surgery." And this is absolutely true of that form of pelvic surgery that comes within the limits of our present subject. The great operation of complete abdominal hysterectomy is indebted practically for its existence and entirely for its usefulness to this posture. This is our only resource in dealing with malignant neoplasms of the uterine body, as well as certain forms of benign tumors which remain to be considered.

The general impression prevails that cancer of the body of the uterus is an extremely rare disease. My own experience, however, for the past three or four years, leads me to an entirely different conclusion. While not as common as cancer of the cervix or breast, still I believe that it occurs as frequently as does cancer of the pylorus or omentum. I have seen within the last year at least six examples. This error has arisen doubtless from the great difficulties of diagnosis that necessarily attend the inaccessible position of the neoplasm. Cancer of the endometrium, however, is easily diagnosticated, and is not a rare affection. The patient first suffers from hæmorrhage. By dilatation and curettement we bring from the uterus granular masses whose malignant or benign character the microscopist can readily determine. Therefore, in one form of malignant disease of the uterine body, we can readily make our diagnosis and act with that promptitude that is always so essential in these cases.

The diagnosis of cancer involving the general structure of the uterine body can be discussed more properly in connection with the consideration of myomata.

Now, summarizing the surgical means at our command for the treatment of malignant neoplasms of the uterus, whether the neck or body, or both, we are confined simply to two great operations—vaginal or complete abdominal hysterectomy. You will all agree with me, I

think, that any surgical procedure short of the two radical ones I have proposed is perfectly useless, and that every cancer of the uterus should be removed when it can be done. We have left to consider, therefore, under this branch of my subject simply the following questions: In what cases we should attempt the operation; what results, both immediate and remote, we may hope to obtain; and in what circumstances the one or the other operation is indicated.

Whenever the disease is entirely confined to the uterus the latter can always be removed. Sometimes, with cancer at the os, it is impossible to determine before the operation whether the infection has extended to the lower portion of the broad ligaments. Under these circumstances vaginal hysterectomy becomes difficult and dangerous, on account of the ureters, and occasionally impossible. When the anterior vagina is even slightly involved the operation again is difficult, and invasion of the bladder is extremely probable if we remove the entire disease. A mere extensive infection of the posterior portion of the vagina does not positively contra-indicate the operation; but again the proximity of the rectum is, at best, a very disturbing condition. But in all these cases of cancer at the mouth the fact that the vagina or broad ligaments have become secondarily infiltrated is an unerring indication of either the long existence of the disease or of a very great malignancy. It shows, too, that the local disease has gone a long way toward a general constitutional infection. The after-history of cases of this kind that have been operated upon abundantly sustains this view. They furnished the principal examples that were formerly so frequently quoted to the discredit of the operation.

In these instances, even if vaginal hysterectomy has been performed successfully and without accident, recurrence of the disease is so rapid, as a rule, that we do our patient very little good. Therefore I would restrict vaginal hysterectomy entirely to those examples of cancer where the neck alone is involved, and where the operation can be done very early in the course of the disease.

I am well aware that I have laid down an arbitrary rule, and that there are several instances in which vaginal hysterectomy has been done where the disease had extended much beyond the limits I have indicated, with the permanent cure of the patient. But, on the other hand, for every one of these examples there are ten where these restrictions have been disregarded to the harm of the patient and the discredit of the operation.

In cancer of the body of the uterus we have one single recourse—complete abdominal hysterectomy. What are its indications and limitations?

In malignant disease of the endometrium, the diagnosis having been established in the manner already suggested, the indication for hysterectomy is unquestionable, and is followed by permanent cure in a majority of cases. When there is a malignant growth confined to the body of the uterus, and also other tumors under the broad ligament or in the ovary, the mass of them being fairly movable, the operation, or at least an exploratory incision, should be made.

Any one of the following conditions seems to me a sufficient contra-indication to any attempt at removal :

A marked decline of the general health, with great deterioration not due to hæmorrhage; enlarged glands in the groin, or an immovable cancerous mass nearly or quite filling the pelvis.

I fully realize that there is much of detail and precision lacking in these directions if we were to rely upon them entirely for the separation of the operable from the non-operable cases. Again, the many and varying conditions outside of all rules that individual patients will present will give us many instances of doubt as to whether an operation is advisable or not. Under these circumstances an exploratory incision—a procedure of slight danger with the hope that it may end in a complete operation—should be made.

We have now to consider the results we may claim for our two operations—vaginal and abdominal hysterectomy. Statistics furnish us only an approximate means of estimating the present death-rate of vaginal hysterectomy, for if we were to rely upon the reports of different operators of their cases, the aggregate would certainly give a higher percentage of fatality than actually belongs to the operation, because these various lists contain the earlier work of the different men. Boldt reports forty-four cases of vaginal hysterectomy with an immediate mortality of six—81-100 per cent. He reports, however, in 1892, twelve cases with no death; Price, of Philadelphia, reports his mortality as below five per cent.; Montgomery reports twenty-four cases with one death; Byford, thirty-seven cases with one death. My personal experience is comparatively small and recent—much too small to be of value statistically in estimating the death-rate of the operation. I have done vaginal hysterectomy eighteen times with no immediate fatality.

One patient, however, died six weeks after the operation and proba-

bly in consequence of it. There was left a fistulous opening into both bladder and rectum, and death was from exhaustion. The loss of this case, therefore, although occurring after six weeks, was fairly chargeable to the operation.

My cases of vaginal hysterectomy, aside from their small number, are at fault for the purposes of this discussion, because eight of them were done, not for cancer, but for complete prolapse.

Of our other operation—complete abdominal hysterectomy—the precise results can only be approximately estimated. You will recall that this operation is absolutely dependent for its existence upon the Trendelenburg posture, and that the latter has been in general use for only about two years. Therefore complete abdominal hysterectomy has been done only a comparatively few times. We are therefore still unable to speak with precision as to its direct mortality, but from what has been done we may safely say that it is about as successful as supravaginal hysterectomy—that is, that the inevitable percentage of mortality is not more than ten per cent.

Hence in the treatment of malignant neoplasms of the uterus we have two operations of choice: one with an immediate fatality of five per cent.—if my estimates be accepted—and the other a fatality of ten per cent.; each a means of treatment that abdominal surgery of the last ten years has put into our hands. And when we remember that so short a time ago, in the presence of uterine cancer, even in its commencement, we were completely helpless, we can not yet fully realize the great promise of these additions to our surgical resources. The remote results of ablation of the cancerous uterus, in one way, at least, are very gratifying. No unpleasant sequelæ of the operation are left. Our patients entirely recover and suffer no serious inconvenience from having submitted to the operation.

When we come to inquire into the question of the recurrence of the disease, we open up a sad chapter of surgical history. Taken as a whole, the after-history of vaginal hysterectomy would indicate fewer permanent cures and an earlier return of the disease than follows excision of the cancerous breast. This bad showing is not at all an inherent failure of the operation, but is due to the error of operating on many cases past all hope of surgical aid. Again, in many instances, the operation is done for more advanced disease than is now the case in amputation of the breast.

Really, the removal of the uterus for malignant neoplasms by either method that has been described should give a better percentage of cures than operations for cancer in most other parts of the body. The uterus and its annexæ are so much isolated from the rest of the organism that malignant germs are disseminated slowly, as a rule; and when we come to operate we can go very wide of the disease. It is simply a question of early operation. The specialist, therefore, appeals to the physician to aid him in securing for vaginal and abdominal hysterectomy the fullest measure of success of which they are capable.

If I may be permitted to step aside from my subject one moment, I will give two suggestions as to diagnosis. However trite they may seem, they are still very important. Whenever there is found at the os an ulcer, or a hard, irregular nodule, a section should immediately be sent to the microscopist. When a patient in middle life suffers from menorrhagia, or especially from metrorrhagia, investigate the case at once. This symptom always indicates a departure of the uterus from a normal condition, and frequently the advent of malignancy. Unfortunately, many women are living in a "fool's paradise," in the belief that this hæmorrhage is a natural attendant on the approaching menopause.

The choice between vaginal and abdominal hysterectomy for removal of cancer at the mouth of the uterus will be largely a matter of preference with different operators. In the hands of one man the former operation will give the better results, while to one who has had much experience in abdominal work the latter operation will be more satisfactory. For myself, in all cases where the vagina is narrow, or the uterus high up in the pelvis, and not very movable, or where there is any suspicion of involvement of the broad ligaments or other complications, I prefer the abdominal operation. I simply reserve vaginal hysterectomy for those cases in which the vagina is very roomy and where the uterus can be brought well down to the vulva. During the past six months I have done complete abdominal hysterectomy four times for cancer at the mouth, and vaginal hysterectomy three times. The abdominal operations were not so difficult for me as the vaginal were. The convalescence of the four patients in which the abdominal operation was done was more rapid and uncomplicated than is usually the case in removal of the uterus by the vagina.

This paper has already occupied so much of the time which the

courtesy of this Society can give to it that the discussion of the treatment of benign neoplasms must be very brief and imperfect.

At this moment, using the words of Dr. Boldt, the treatment of uterine myomata is in an experimental stage; and this utterance is truer to-day than it would have been three or four years ago, for our resources then consisted practically of a multitude of palliative and semi-surgical procedures and the one radical operation—supravaginal hysterectomy—while to-day we have discarded some of our palliative measures and are employing the others much less than formerly. On the other hand, we still have our first operation, supravaginal hysterectomy, with the pedicle fastened in the lower part of the wound, extraperitoneally, and several other operations that have been recently introduced; or rather, perhaps, speaking more correctly, modifications of the old supravaginal operation.

First, fixation of the pedicle below the abdominal wound, but still outside of the peritonæum (Kelley).

Second, Byford's method of making an incision through the vagina in front, beneath the bladder, and turning the pedicle down through that incision.

Baer's method, or rather the one with which Dr. Baer's name is especially identified—ligating the broad ligaments and uterine arteries, and leaving the pedicle within the abdomen without any constriction. He depends, of course, upon ligature of the uterine arteries to sufficiently control all hæmorrhage.

I simply refer to these several modifications, because so far, in the skillful hands of their advocates, they have already given excellent results. They also obviate two great defects of the extraperitoneal treatment of the pedicle—namely, the long convalescence and the danger of subsequent hernia.

Some one of them indeed may, in the future, become the operation that will entirely supersede the old one. For myself, I prefer complete abdominal hysterectomy rather than any of these modified operations I have mentioned. I have had considerable experience with the latter, and the results have been so satisfactory, and the technique has seemed to me so simple in comparison with the procedures mentioned, that I shall continue to substitute this operation in place of the original one under certain conditions. Therefore at this time, for the radical treatment of uterine fibroids, my own surgical resources consist of supravaginal hysterectomy with the pedicle outside, and complete abdominal hysterectomy.

Calling your attention for a moment to the palliative methods of treatment for uterine myomata, probably the most valuable is curettage for the relief of hæmorrhage—a single one of the many evils that this neoplasm inflicts upon its possessor. This procedure fails in a majority of cases precisely as does electrolysis, and for the same reason. Neither the sound attached to the battery nor the curette in the surgeon's hands can reach the whole diseased endometrium in the tortuous uterine canal. In every other respect electricity, after a trial of seven years, has disappointed the great expectations of its advocates.

Removal of tubes and ovaries as a treatment of fibroids I have now entirely discarded. The operation does not always arrest hæmorrhage or stop the growth of these tumors, nor does it prevent the malignant degeneration to which they are liable, while, on the other hand, the operation is almost as difficult and dangerous as hysterectomy is at the present time.

Dr. Martin, of Chicago, has recently introduced as a palliative operation ligation of the uterine arteries through the vagina. The value of this operation is still for the future to determine. But in the future treatment of uterine neoplasms I believe that palliatives will have a small place. Palliative treatment belongs to incurable diseases.

The addition of complete abdominal hysterectomy renders the means at our command for the removal of uterine myomata well-nigh perfect. Practically there are no longer any cases in which the operation is impossible. The future, therefore, in this direction has for us no advance except in details of operation. Complete abdominal hysterectomy is especially indicated in those cases of small fibroids extending under the broad ligaments or growing from the lower segment of the body of the uterus or neck, and packed deeply within the pelvis. It is precisely in this class of tumors that supravaginal hysterectomy has been very difficult to do, and frequently impossible. This operation should be selected also in other instances, in which, from thickness of the abdominal walls or rigidity of the pelvic floor, it is difficult to bring the pedicle out at the lower angle of the wound. On the other hand, in those instances of delayed operation—which, let us hope, will become rapidly less and less—where the patient's strength has been seriously exhausted by hæmorrhage, the size and pressure of the tumor or septic infection of a degenerating myoma, supravaginal hysterectomy will be the operation of choice. Under these circumstances the length of time that the operation occupies is a very important factor in the result, and

our old operation can be done much more rapidly and easily than the new. In ordinary cases we may choose at will the one or the other. The advantage of supravaginal hysterectomy is its great simplicity; the advantages of abdominal hysterectomy are the shorter convalescence and diminished danger of subsequent hernia.

Finally, what are the indications for hysterectomy in the treatment of uterine myomata? Not long since, the existing or prospective large size of the tumor was the main indication for removal that was recognized. The logical deduction from the teaching that these neoplasms were benign, and always remained so, would be, that they could do no harm, except from their size or their direction of growth. The attendant accident of hæmorrhage was simply a symptom to be treated by palliatives. But latterly more careful and long-continued observations of the clinical histories of myomata in large numbers have corrected many errors and given us new data from which to formulate our rules of treatment. Only a very small proportion ever reach a size sufficient to make them dangerous to the life of the patient.

Secondly, we are not dealing with a self-limited disease—limited by the menopause, as has been so generally taught. On the contrary, the approach of the climacteric, instead of affording relief to patients with myomata, is really the most dangerous period in their lives. A record of ninety-four cases of uterine fibroids shows that forty-three of them developed dangerous and formidable symptoms in patients between the ages of forty-two and fifty. But the greatest danger with which they are attended comes from their liability to various retrograde changes, among which may be mentioned calcareous, necrotic, pus-forming, cystic, and malignant degenerations, the latter the most important because the most frequent and insidious of all. Out of one hundred and ninety-six cases, in thirty-eight, Martin, of Germany, found changes in the tumor which, he said, certainly represented the opposite of that which could be called benign. Another danger comes from pus-tubes and tumors of the ovary, with which they are often attended. When these complications occur they are fully as dangerous as are pus-tubes and ovarian cysts in other patients that have no fibroids.

From these few facts we may at once infer that any rule as to operation based on the theory that we are dealing with benign and consequently harmless growths can be nothing else than an incorrect and dangerous one. Again, small fibroids are quite as likely to become

malignant as the large ones, and when they involve the body of the uterus we can only make a probable diagnosis as to their malignancy. In fact, it is impossible to determine with any precision whether these small outgrowths from the uterus were fibroid in the beginning or cancerous; or whether or not, beginning as fibroids, they have degenerated into cancer. The clinical history and general aspect of the patient will afford us some diagnostic aid. If she is pale, cachectic, debilitated, and progressively losing in strength and weight, malignancy of the tumor may certainly be suspected. Still, other forms of degeneration often produce a similar train of symptoms. At any rate, the indications for removal of the tumor are urgent, whatever its pathological character. Remove the growth first, and make the diagnosis afterward. Whenever the general health of a patient by reason of a uterine neoplasm descends greatly from the normal standard, she is ever afterward an invalid until the abnormal growth is removed.

It is undoubtedly true that many myomata produce no symptoms. There are no means of knowing how frequent such cases are, but we may, however, dismiss them as of little interest in the present connection, for there would be no question in such instances of an operation. But whenever a uterine myoma, large or small, begins to impair the general health, or produces pain enough to seriously demand relief, I would advise hysterectomy as our only means of cure. The operation, with its present death-rate of ten per cent., is less fatal than the disease, while in nine cases out of ten it brings perfect health in place of chronic and hopeless invalidism.

In short, with the exception above noted, I would apply to uterine fibroids the general surgical rule that Mr. Bland Sutton has well indicated in the following words: "It is a noteworthy fact that most pathologists, who have taken comprehensive views of tumor formation and have made it a serious and prolonged study, are of opinion that tumors, innocent and malignant, are in the beginning local troubles, and that the safest and most effectual method of dealing with them may be expressed in one short sentence: Thorough removal of the tumor, whenever this is possible, at the earliest possible moment."

THE RESULTS OF INTERMARRIAGE FROM A SCIENTIFIC STANDPOINT.

By H. EDWIN LEWIS, Burlington, Vt.

For years a common idea has existed among all classes to the effect that the marriage of first cousins or near relatives would prove fatal to the offspring and future generations produced from such a union. This idea probably took its origin from the 18th chapter of Leviticus, and has long been viewed from a semi-superstitious stand point, with no thought of the rational reasons for the positive results which have appeared in the past.

The general class, as a rule, are entirely innocent of any attempt at philosophy, and so taking a superficial view of these results a social law has been created *forbidding* intermarriage.

And, believing that "all things work together for good," the object of this article will be an attempt to prove that the social law is fully justified by scientific conclusions.

In the first place we must admit the possibility of exceptions to the rules deduced from our theories, for all results depend to a greater or less extent on existing circumstances.

However, it is not our intention to consider the exceptions, except in a general way, so we pass on.

At this day when the certainties of heredity have become almost a part of our religion, if not quite so, we must consider human phenomena in the light of hereditary influences.

Anthropologists tell us that a race, a colony, or a family propagating entirely within itself, never reaches the high development of those people who are the product of two races, two colonies, or two families. In other words the hybrids or mongrels show greater physical development than the so-called thoroughbreds. This is certainly along the line of reason, for using our doctrine of heredity we can easily comprehend the statement.

In the family generating within itself, the good qualities common to the individual parents are transmitted to the offspring who show the sum of those qualities. That is, representing the good qualities of each parent as one, the offspring will have the sum of those qualities, or two. And continuing in the same line of reasoning the bad qualities common to the parents will be produced in the same proportion.

Now, considering the good qualities as the normal condition of health, or the positive force, and the bad qualities as the deviation from the normal, or the negative force, let us note the result.

As is well known, relatively normal conditions of health of the whole body, are rare, and we often see an abnormal condition of the heart, the brain, the lungs, or any other organ transmitted through a whole family. So following our rule of one and one making two, the result of inter-marriage in the above family can easily be seen.

But on the other side, supposing that a person with strong nerves, giving a family history of weak lungs, marries a person with healthy lungs, though giving a family history of nervous derangement, what is the result? Again following our rule we might expect to find in their offspring the healthy or positive forces of one parent neutralizing the unhealthy or negative forces of the other, and vice versa. But such is not the case, for the abnormal condition in the process of heredity is the stronger force *by about one-half*.

Therefore a child would show the influences of both parents, though in a less degree of activity. A rule, mathematically correct can hardly be evolved to represent this degree, for environment is an unknown quantity, and a most important factor in physical life, but generally speaking the unhealthy condition or tendency of a child resulting from parents individually representing positive and negative conditions of health, may be expressed as *one-half* the negative influence. This conclusion is substantiated by facts which we observe in studying the evolution of life and the development of the species.

Now, as before stated, it can easily be seen from these deductions what the result of intermarriage is liable to be. Family ailments in the children will be the sum of those common to the parents, and the tendency from generation to generation will be to grow worse and worse. This is the scientific objection to the marriage of first cousins or near relatives. While in the marriage of members of different families presenting unlike conditions or degrees of health the tendency will be to decrease the unhealthy conditions and approach a perfect state.

Of course, a condition of things can readily be imagined whereby cousins presenting absolutely no physical imperfections could marry and propagate children also physically perfect. But this is the exception and entails a great amount of risk, even granting the conditions of perfect health.

Principally, because it is only reasonable to suppose since physical conditions are transmitted with such a degree of certainty, that mental characteristics also follow the same rule. This is obvious, for taking an extreme illustration, we often see criminal tendencies running through a whole family. History bears out this fact, and it might safely be said that mental conditions persist even more frequently than physical.

They are not so easily distinguished for many times the elements of the mind are potential, and therefore not discernible. But, as often happens, the potentialities of the parent mind are extremely liable to become active forces in the children.

And so it goes on.

Possibilities and probabilities have been the theme of this paper. In regard to certainties nothing can be said, for Nature is continually greeting us with surprises. But it is safe to quote the old saying of "blood will tell." It surely will, and before entering the marital relation, every intelligent person should consider the possible results. God knows we are weak enough in this generation without giving to the next a double burden of our own infirmities. Let other desires than those of blind passion control our action, for marriage in the highest, noblest sense involves immense responsibility.

The next generation should be an improvement upon our own, and we must answer for the result. If mankind will only consider that they owe a duty to their Creator and their Country, they will give to their offspring the best of parentage within their power. And just as soon as men awake to the realization of what their influence will be upon the future generations, just so soon will proper legislation be brought to bear upon this all important subject. The marriage license in the near future will require a statement of personal health and a family history from both parties, before being granted. And this will be right, for there are men and women to-day whose lives are tortured with remorse as they see their innocent children growing up the victims of their own ignorance and carelessness. A word of warning or a knowledge of the real facts before the "die was cast" would have saved untold misery and suffering.

Then let every man and woman open their eyes and think conscientiously of their position. Are they fit to marry? And are they providing for their children a parentage justified by their knowledge? If so, let them go on. But if not, in the name of their hopes for the future, both in this life and the life beyond, let them stop and consider the awful step they are about to take. On one side married life with an existence

made miserable by a living conscience and vain regrets, and on the other denial of personal gratification, but a clear conscience and a knowledge of a duty fulfilled. Which will it be?

DERMATITIS VENENATA.

REMARKS UPON ITS NATURE AND TREATMENT.

BY J. ABBOTT CANTRELL, M. D., Professor of Diseases of the Skin
in the Philadelphia Polyclinic and College for Graduates
in Medicine, Dermatologist to the Philadelphia
Hospital and to the Southern Dispensary, Philadelphia.

As the season of the year approaches when we are likely to be summoned for advice in case of ivy poisoning, it is well that we know something of its appearance as well as the mode of treatment that may best relieve the condition, and together with you I will survey its lesions, from their first showing themselves until they are mature. Following this I hope to be able to show some easy means of combating the disease.

Before proceeding to the appearances of the lesions we should know that ivy alone does not produce this affection, but we are indebted to poison oak, sumack, and about sixty other plants for its appearance, which have been collected in an admirable treatise by Prof. James C. White (*Dermatitis Venenata*, Boston, 1887).

The eruption is first noticed as an erythema, scattered over a large or small area, with this we may be confronted with decided œdema and swelling, or this may not be witnessed until after the appearance of papules, which show themselves over the erythematous patch. These papules are small, pin point to pin head sized, as first seen, rapidly becoming larger, and as they become so changing into vesicles. After the formation of these vesicles we have the characteristic lesion of the disease, as it is usually seen, because persons so affected do not as a rule show themselves until this stage has supervened. These vesicles ordin-

arily increase in size, some of them being as large as an ordinary bean, but most of them remaining about half pea size.

The tendency of the vesicles is to break down, but previous to this condition taking place the walls of each cavity is found to be very thick and tough, and they resemble a boiled sago grain. Their color is a dark yellow, and from the external appearance their contents seem to be different from ordinary vesicles, that is, that it appears to be gelatinous or semi-solid. We have an area of diffuse, (acute though not of high color,) inflammation being covered with numerous vesicles, which are discrete although closely packed, and after a time coalescence may take place, showing a flattened lesion. Following this the lesion ruptures and throws off a yellowish gummy or gelatinous fluid, which adheres closely to the parts and forms a decidedly thick and tough crust. Upon removal of this crust the parts are found to be denuded of epithelial tissue, and to be of a highly inflamed character, very sore to the touch, and otherwise to feel very disagreeable. The parts of the body usually affected are those which are cons'tantly exposed, as the face and hands, but the process may extend to the adjoining parts. If at any time the person is exposed to the action of the poison in a nude state, as when in river bathing, some other part of the body may show the condition.

It may be well to mention, at this part of the paper, that it is not alone the touching of the plants that may affect one, but some are liable to the affection if they happen in the vicinity of the plants.

If it is produced by some irritant taken internally the condition may be found anywhere on the body surface, and here the appearances of the skin manifestation are the same as when the disease is contracted by the poison coming into contact with a single locality. While the disease is not considered contagious it has nevertheless been communicated from person to person, and an instance of this is recorded by Prof. White (*loc cit*) in which a boy who had been in poor health had taken a bath in the river, at which point there were no poisonous plants, the body being rubbed by a servant, who himself had not been susceptible to the poison, but who had handled it a short time previous, but had cleaned his hands thoroughly before the rubbing process. The disease was contracted by the innocent boy. Another instance is recorded by myself (*Medical News*, Oct. 24, 1892,) in which nurses carried the affection to a parturient woman, although their hands had been thoroughly cleansed by watery solutions and by a bichloride wash. In the latter case the condition was noticed upon the abdomen, which had

been handled by the nurse in dressing the patient. So, therefore, even though the disease is generally a harmless one it is wise not to place any one who may be in delicate health or in otherwise a position to take the poison, in harms way.

The diagnosis is generally an easy matter when we take into consideration the character of the lesion, its mode of invasion, its apparent suddenness of onset. After the process has lasted awhile we may judge from the peculiar vesicle, its discharge of a gummy liquid and the peculiarity of the crust which is generally profuse.

The prognosis is favorable at all times, but we should be aware of its decided intensity of inflammation, its tendency to spread, and the consequent œdema and its apparent powers of swelling.

Thoroughly understanding the affection before us we direct our attention to those remedies which have the power of arresting inflammation, and the one that will perform this action the more quickly is the one to be chosen.

Hyposulphite of sodium has its followers, and may be used in strengths ranging from one dram to the ounce of water, or saturated solutions of carbonate of sodium may give the desired effect.

I myself had been in the habit of using the fluid extract of *grindelia robusta* in the strength of two drams to the pint of water, and keeping this in constant contact with the affected area, but I found that if the part was thoroughly saturated with it too frequently that it was liable to set up a decided inflammation, which, added to the original trouble, was often very rebellious, and as this remedy generally took about two weeks to bring about a cure I naturally was on the look out for an application that would give the desired effect somewhat sooner, and following this idea I made some experiments with the chlorinated soda solution (laborraques solution) and found that with it I was able to cure my cases in a much less time. After using this remedy in some one hundred cases I found that by using it frequently in strengths varying from its undiluted state to one-half strength that my cases were relieved in from four to seven days, I naturally have placed the *grindelia robusta* solution aside. In making use of this remedy I generally advise its application in one-half strength in those cases which are seen early and where the inflammation has not as yet reached a high degree, especially in the erythematous variety, but in the more advanced cases where the inflammation has become a decided symptom I advise it in undiluted solution.

Following this I further made experiments with a still later drug, salol, and found that it gave very good results in all of my cases, and I here include one of the more aggravated.

A boy aged 14, presented himself for treatment on the 9th of August last, complaining of an eruption on the upper portion of the face and surrounding the left eye, also on the neck, upper part of the chest, about the wrists and on the dorsal surface of the hands and fingers. He stated that it was of five days' duration, and that he had been visiting one of the near by pleasure grounds and had probably contracted it in this manner. The face was decidedly swollen and œdematous, the left eye being almost closed. This condition of the face was more of the erythematous variety, although beginning to show the formation of vesicles. The lesions on the other portions were distinct, discrete, although closely aggregated vesicles, filled with pure serum. The parts other than the face did not show great puffiness, although there was some tendency in that direction.

He was ordered thirty grains of salol, which was dissolved in one ounce of liquid cosmoline, and admonished with the direction that this application was to be kept in constant contact with the affected regions.

August 11th. The condition on this date showed almost entire disappearance of the swelling of the face. The lesions situated on the face and upper part of the chest, have left simple spots of redness, and in places look like enlarged papillæ. The face is crusted, but this is most likely the thickened cosmoline remaining on the surface. The lesions on the left hand are distinctly vesicular, although some seem to contain a sero-purulent fluid. The lesions in this locality have not ruptured, with the exception of one or two around the sulci of the fingers.

Here and there is an admixture of dead epithelium with the peculiar gummy discharge of the disease. The lesions are all of the sago grain appearance as usually observed in this disease, with the exception of one patch over the lower end of the radius (dorsal surface), which seems to have run together, resembling an eczematous condition, although somewhat raised and reddened in color, without any areola. The lesions on the right hand show exactly the same condition, with the exception of a patch on the flexor surface, slightly above the lower end of the radius; this resembles to a great extent, the scratch-marks due to the friction for the relief of the itching.

The boy returned again on the 15th of the month and the parts

showed only a slight redness ; there was no itching or other uncomfortable symptoms. He did not return after this date.

Following the remarks above quoted, I have reason to believe that the treatment of this affection will prove very beneficial in a short time, and that in the more aggravated cases the feelings of the sufferer will be the more quickly mitigated.

So numerous are the remedies that are recommended for the treatment of this disease I think it would be a waste of space to refer to them more than in a general manner, and while they can be relied upon in some of the milder cases to give relief and cure, I can not think that there is any drug that will give it so soon and the relief so quickly as either the Laborraques solution or the Salol as mentioned. I should advise either of these remedies in the strength mentioned above, and further, that they may be kept in constant contact with the parts without the danger of increasing the inflammation, as may be done with some of the remedies that have been recommended. I have at times dissolved thirty grains of salol in ether, and found that its action was the same as that produced by its solution in liquid cosmoline, without the tendency to increase the greasiness of the part, but the ether evaporates so quickly that I feel that the soothing action of the liquid cosmoline is more appreciated. — *The Charlotte Medical Journal*.

The Vermont Medical Monthly,

*A Journal of Review, Reform and Progress in the
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H. EDWIN LEWIS, MANAGING EDITOR.

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All communications of any nature whatsoever should be addressed to H. EDWIN LEWIS,
Box 21, Burlington, Vt.

EDITORIAL.

In the February number of this publication there was an article on the need of an institution for the care of feeble minded children. While we do not wish to repeat what has been said, we cannot help but feel that the subject is a too important one to be forgotten.

Scarcely a day goes by but what one sees some poor child with feeble intellect whose innocent failings render it incapable of mingling with other more intelligent children. For these poor creatures some means should be taken to provide them with such mental training as is commensurate with their abilities. Actual experience in the Massachusetts School for Feeble Minded Youth has proven that these children can be so trained with care and patience as to enable them to provide and maintain themselves. This is a grand triumph and almost like restoring life to a dead body, for of what use is mere physical life to a creature utterly devoid of reason or power to attend to its simplest needs?

Vermont is a notably progressive State and its charitable institutions are unsurpassed by any in the country for efficiency and practical results.

A demand always receives a generous response in this State, and we know as soon as the people appreciate the need of a proper institution in order to care for their unfortunate feeble minded children, that there will be steps immediately taken to provide such a one. We believe that the time is close at hand. There are a number of cases in Vermont of which we know, who at the present time are being sent to outside schools at a great expense to their parents or relatives, and there are many others whose folks cannot afford to send them away. An institution under State jurisdiction and competent management would meet all needs of the imbeciles in our own State, and a noble work could go on. But without some such arrangement the feeble minded children, especially of the poorer classes, are going to grow up a menace to both society and the State. They naturally are more open to the evil designs of unprincipled individuals than the ordinary child, and so become easy prey to the wiles of crime.

Therefore, in a few years as they get older and are thrown among these influences, it will become necessary for the State to assume their control and expense when it is too late to change their secondary instincts, unless they receive proper training now.

There are plenty of people who will give time and money for this work, and when they begin their labors the Vermont Medical Monthly stands ready to do its share to win success.

This month we establish a Want column on page 8. Personal wants of *subscribers* will be inserted once free of charge, if consisting of not more than 30 words.

UNIVERSITY OF VERMONT MEDICAL DEPARTMENT NOTES.

May 20th Dr. A. M. Phelps begins his lectures on Surgery, Dr. A. F. A. King on Obstetrics and Dr. R. A. Witthaus on Chemistry.

These courses always attract a large number of special students, but this year an unusually large attendance is expected. There seems to be an abundance of clinical material, far exceeding other years, and without doubt this year has been the most successful one in the history of the College.

THE NEW HAMPSHIRE MEDICAL SOCIETY.

The One Hundred and Fourth Anniversary Meeting of the New Hampshire Medical Society will occur June 3 and 4, 1895, at Concord, N. H.

An excellent programme has been provided and the meeting is looked forward to with interest by local members of the profession.

DOCTOR—

Are you a subscriber to the Vermont Medical Monthly? If you are not, now is a good time to send in your subscription of one dollar. We wish our circulation to reach the 2500 mark by July 1st. *Will you help us?*

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MEDICAL ABSTRACTS.

DISARTICULATION OF THE KNEE-JOINT.—Habs (*Deut. Zeitsch. f. Chir.*, XL, p. 173). Habs makes a vigorous plea for the adoption of disarticulation of the knee-joint, when there is sufficient material, rather than amputation low down in the thigh, quoting the experience of the late Prof. Hagedorn, with whom the operation had long been a favorite. Although the method used—that of a long anterior flap—will seem strange to Americans, who are much more familiar with the lateral flaps of Rossi and Stephen Smith, the results are certainly excellent. Eighteen of the twenty cases adduced were operated upon in this manner, and in only two was there any considerable gangrene of the flap, although in three others there was a narrow marginal necrosis. In one case the flap was cut too short, bringing the scar over the end of the bone, and rendering it impossible to use it for support. The final result is noted in fourteen of these cases, being good in eight, moderately good in four, and poor in two. Eight could use an artificial leg, taking its support from the end of the stump, while three could not bear this, and required pelvic support as well. As to atrophy of the stump, this was observed only where it was not used for support. In some of the children (four cases under fifteen years of age the extremity did not equal the other in growth, but the difference was not enough to impair its usefulness. The author estimates the results with judicial severity, and the advantages of the operation are not exaggerated.

RUPTURE OF THE URINARY BLADDER WITHOUT SYMPTOMS; DEATH.—Nicolich (*Riv. Veneta di Sc. Med. and Gazz. d. Ospedali e del. Clin.*, 1895, p. 149). A man 24 years of age came to Nicolich complaining of retention of urine, and, a catheter being introduced, one hundred grammes of perfectly clear urine were drawn off. The following day, although the retention had ceased, he was found to have symptoms of peritoneal irritation, pain and tenderness of the lower portion of the abdomen, slight tympanites, normal temperature, frequent pulse. The next day the eyes showed an icteric tint; there was bile pigment in the urine, no vomiting or hiccough, but numerous diarrhetic stools, small and rapid pulse, temperature 37.3 C. An ecchymosis developed in the scrotum and perineum. He grew worse, the ecchymotic portions became edematous, and death supervened in coma.

The autopsy revealed a loss of substance in the posterior wall of the bladder, the size of a piece of five centesimi, with ecchymotic edges. The urine was perfectly clear. The judicial inquiry developed that on the night previous to the beginning of the illness, the patient, while drunk, had slipped and received an injury to the lower part of the abdomen by falling against the corner of a chair.

HICCOUGH AND ITS TREATMENT.—In a recent number of the *Atlantic Medical Weekly*, Dr. Chas. O'Leary of Providence, R. I., contributes a valuable article on Hiccough and its Treatment, in which he describes a novel form of treatment entirely original with himself. Several cases of more or less severity are cited and the results obtained in each.

"In the fall of 1873, on returning to my office about 11 a. m., I found a man sitting there, and hiccoughing so violently that he could scarcely answer any questions. He was from one of the manufacturing towns of the state, and was a mill operative. On removing his clothes, I placed him on the lounge, with the ice applied, from his neck to below the middle of back along the spinal column, and told him to remain so until I returned from a neighboring drug store, where I went for some medicine to relieve him. When I returned he was sitting up, looking cheerful, and said he was all right. I advised him to remain half an hour in my office; on my return I found him comfortable. He told me he had been suffering day and night for six weeks, with little sleep, except what came from exhaustion. I requested him to report to me again in a few weeks; he did so, but had no return of his suffering, and stated that when he arrived at the village, the day he had recovered from his illness, the people who had known his suffering flocked around him in astonishment. He told me his life was one of hard work; had no bad habits to injure his health, and had never had any sickness. His age was about thirty-five.

In 1880, I was called in consultation with Dr. Eugene Kingman of Providence. The patient, I found, had been suffering from hiccough for four days, with no improvement having taken place. A consultation was demanded; the patient presented a distressed countenance; a feeble exhausted condition in general. I advised to have the ice bag applied, as in the other cases; in five minutes the hiccoughs ceased. The doctor and myself agreed upon the same prescription, in case the hiccough returned, and the ice would fail. Dr. Kingman, in talking over the case subsequently, told me he had consulted all authorities known to him on the subject, and found no mention of this treatment. I answered neither had I, but that he would find a case reported in the records of the Providence Medical Association of February, 1871, where it rests.

I met the patient a few months ago, nearly twenty years after the treatment. He told me he had never had a symptom of hiccough since the ice had been applied. He is a gas fitter or plumber by trade."

TREATMENT OF HEMORRHOIDS.—According to Dr. G. Roux, an excellent method for treating hemorrhoids consists of dilatation of the anus associated with injections of a solution of glycerin and phenic acid, 50 to 80 per cent., practiced in the tumors.

The patient chloroformed or otherwise, is placed in the position for lithotomy. The operator introduces his two thumbs into the anus, which he dilates gradually until the fingers touch the ischium on each side, and by which means the tumors are rendered prominent. Into each of these, compressing the base between the thumb and forefinger, are injected two drops of the prepared solu-

tion. The needle of the syringe is inserted from without inwards, so as to avoid the hemorrhage which might take place if inserted from the rectal side. A few seconds after the operation the tumor swells up and assumes a blueish color. A piece of iodoform gauze coated with vaseline and boric acid is placed *in situ* and maintained by a T bandage. The pain resulting from the operation is insignificant.

The next day the hemorrhoids are found to be hard, but not painful, and in a few days they wither away. Rest of one or two days in bed completes the treatment.—*Med. Press and Circular*.

THE HYDROPATHIC TREATMENT OF PNEUMONIA.—(*Journal des Practiciens*, 1894, No. 37). Dr. Rendu reports two successful cases. In the first case he prescribed the wet sheet and sulphurated antimony. Each time that the wet sheet was applied there was relief, and although this procedure alone did not modify the evolution of the disease, it certainly diminished the dyspnoea and hyperpyrexia, and otherwise contributed to the cure by relieving the work of the kidneys. In the second case, alcohol with tincture of digitalis was used, the wet sheet was ordered, and cold baths were frequently administered in aggravated periods of delirium. Their effect was beneficial. "In pneumonia, cold baths constitute a therapeutic measure of the first order, truly heroic. Their use is in reality, a return to the first ages of medicine, for Hippocrates has shown their good effects in pneumonia, and has established the fact that they diminish the stitch pains in the side, facilitate expectoration, and are diuretic."

In his article on the Treatment of Enteric Fever, in the *Yale Medical Journal*, Dr. Gustavus Eliot concludes as follows :

I. Keep the patient in bed until for an entire week the temperature has been normal.

II. Keep him on a sterilized liquid diet as long as he remains in bed.

III. At the beginning of the disease give ten grains of calomel on alternate days.

IV. Give one grain of carbolic acid and three drops of tincture of iodine, every four hours, during the entire illness.

NEWS NOTES AND FORMULA.

Dr. J. H. Woodward of Burlington, has returned from his trip abroad.

In photophobia without apparent cause, conium is the first remedy to be thought of.

Hydrogen peroxide is recommended for arresting hemorrhages both venous and arterial.

Monosulphite of sodium, six grains a day, causes rapid elimination of lead in lead colic.

Calcium phosphate is said to yield excellent results in chronic enlargement of the tonsils.

Exalgine is highly recommended for the relief of the lightning pains of locomotor ataxia.

A solution of Listerine, one-half ounce to the ounce of water, will clear the hair of dandruff and prevent its falling out from that cause.

Dr. D. C. Hawley, Secretary of Vermont State Medical Society, attended the annual meeting of the American Medical association at Baltimore, and read a valuable paper on the "Treatment of Hydrocele."

Creosote in pulmonary phthisis, though reports are generally favorable, still often fails. Two drops three times a day, increased slowly until the bowels are irritated; it may go up to ninety and one hundred drops. It is contra-indicated when fever occurs. It may be given in capsules but best in milk, gulped down. In chronic bronchitis it is of great advantage, but when the urine becomes smoky discontinue. It generally cures.—*Lancet*.

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R. Tinct. Sanguinaria, $\frac{1}{2}$ dr.
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Bromidia, 1 oz.

M. Sig.: Ten drops for a child 4 months old, and a half teaspoonful for one 4 years old, to be given after meals and at bed-time.

INCONTINENCE OF URINE.—Dr. J. Blake White recommends :

R. Sodii Benzoatis, 20 gr.
Sodii Salicylatis, 20 gr.
Fld. Ext. Belladonnæ, 2 drops.
Aquæ Cinnamomi, 4 oz.

M. Sig.: A teaspoonful four or five times daily, for incontinence of urine in children.

DYSENTERY.—At a recent meeting of the Medical Society of London, Professor Bahadurji, of Bombay, read a paper on the treatment of dysentery, which he said was not a contagious or infectious disease, nor in any sense specific. He claimed to have reduced the mortality to almost nothing. Instead of endeavoring to keep up the strength of his patients by meat juices and extracts, which he said acted only as irritants, he gave arrow-root milk. In the way of medication he gave bismuth, Dover's powder and soda, with the object of neutralizing the acidity of the blood, of calming the abnormal action of the glands of the large intestines, and of rendering the canal sweet and free from decomposition. He pointed out that the action of the ipecac and the alkali was to render the thick, sticky mucus more liquid, and thus enable it to be gotten rid of.—*Med. Press.*

OIL OF TURPENTINE AS A HEMOSTATIC —Dr. J. Sasse (*Therap. Monatsh.*, 1895, IX, p. 83).—The hemostatic property of oil of turpentine has been known for some time, but not utilized as it deserves. According to the author, excessive bleeding caused by extraction of teeth can quickly be stopped by the application of a piece of cotton saturated with oil of turpentine, even when all other methods fail.

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The author states that Dr. Gobeë had a case of acute nephritis, in which he succeeded in arresting the presence of blood in the urine by means of oil of turpentine, after other remedies had been tried in vain.

OBESITY.—A new treatment of obesity has been propounded. It is based on a new theory. The victim of corpulence is fed on one pound of lean meat and one pound of fish per day, and is obliged to drink a pint of hot water every two hours. Nothing else in the way of food or drink is allowed. The theory is that the food being purely nitrogenous, the needful hydrocarbons are supplied through absorption of the excessive fat. The large quantities of hot water are for the purpose of averting the renal disturbance to which those who live chiefly on nitrogenous diet are peculiarly prone.—*The Med. Brief.*

HOW TO REMOVE CINDERS FROM THE EYE.—When traveling, always carry a tiny box of flaxseed for possible cinders. The instant a foreign substance is felt in the eye throw the head back and drop two or three flaxseeds on the ball of the eye and lift the upper lid and draw it down over them, so as to hold them in. There is no disagreeable sensation attached to putting the seed in, and the relief will come instantly. The moisture of the eye dampens the seed, and it gives out a mucous substance which spreads over the eye and covers the grit. After awhile the seeds will begin to work out and will bring the offending particle with them.—*The Med. Brief.*

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M. Sig.: Use as a gargle several times a day.

BOOK REVIEWS.

HUMAN ANATOMY—By Henry Morris, F. R. C. S., Surgeon and Lecturer on Surgery, Middlesex Hospital, etc., etc. Published by P. Blakiston, Son & Co., Philadelphia. Cloth, \$7.50; Sheep, \$8.50.

This colossal work is devoted entirely to anatomy, and easily takes rank with Gray. For years Gray's text book has been the leading reference for students of anatomy and even to-day there are many who deem it almost heresy to take up one of the newer books. But this work of Morris clearly has our preference, for the general excellence of the text, together with the large number of splendid illustrations, combine to form a most attractive and practical text book. It is so comprehensive and complete from beginning to end that one is impressed at once with the immense amount of labor involved in its compilation. The various sections have been written by men of recognized ability and the editorial work shows care and accuracy seldom seen.

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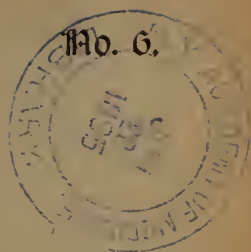
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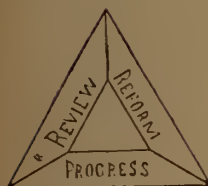


The Vermont

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Monthly

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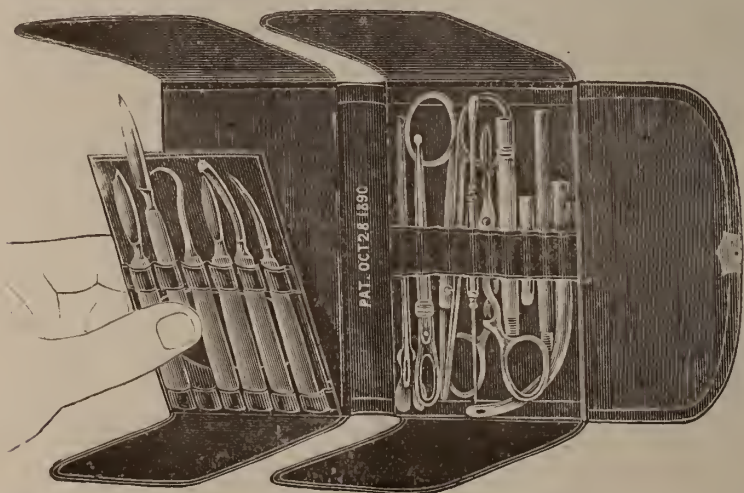
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The Vermont Medical Monthly,

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VOL. I.

JUNE, 1895.

NO. 6.

(Original Papers)

FURTHER EXPERIENCE AND OBSERVATIONS IN HYSTERECTOMY FOR FIBROIDS*.

By S. C. GORDON, M. D., Portland, Me.,

Lecturer on Diseases of Women, Portland School for Medical Instruction. Surgeon Maine General Hospital. Consulting Surgeon Maine Eye and Ear Infirmary. President Maine Academy of Medicine and Science. Ex-President Maine Medical Association. Ex-President Section of Obstetrics and Gynecology, American Medical Association. Fellow British Gynecological Society Council 1892. 157 High Street.

Two years ago in a paper read before this Society, I used the following language: "I fully believe, if it were the rule in every case of fibroid of the uterus, to make hysterectomy before the patient was exhausted by hemorrhages, peritonitis, salpingitis and consequent invalidism—in short, if we operated upon all cases in the early stages, as we all advise for cystoma of the ovary—that our mortality would be no greater, and at the end of a year we would have a much greater sum of human happiness and relief to physical suffering."

This and other papers on the same subject gave rise to one of the most animated, exciting and interesting discussions in the whole history of the Society. My friend, Dr. Mundé, severely criticised my position and declared that, in his own experience and practice, only about "ten per cent. of the cases he had seen required treatment." (Presumably surgical treatment). Farther on in the discussion he says "in my opinion at least seventy-five per cent. of these do not require an operation, or, indeed, any surgical treatment."

* Read before the American Gynecological Society. May, 1895.

Fortunately for the credit of the profession, as I believe, the large majority of those who took part in the discussion, did not endorse Dr. Mundé's views, while many, and notably those of large experience, more nearly approved the position I assumed in my paper.

The general sentiment was in favor of removing all uteri containing fibroids that had given the woman sufficient trouble to cause her to seek relief. The great point of difference was as to what would really be the degree of suffering to justify surgical interference.

Believing now, after two years of much larger experience, that any discovered fibroid may soon or late become a source of trouble and the foundation for invalidism, I honestly and conscientiously adhere to the position then taken. I have steadily and uniformly followed the practice of the principle then laid down and have seen no reason to regret it. In every case where I had the consent of the patient I have made hysterectomy, and in a large majority of the cases complete hysterectomy, as advocated in a paper read before the American Medical Association in 1892, entitled "Hysterectomy without Pedicle." The more I make the last operation (complete hysterectomy) the better satisfied I am with results. I rarely have unpleasant complications arising after. In several very recent cases where I have removed the entire cervix, there has been an uneventful recovery, with scarcely a rise of temperature. However little of the cervix is left, there will always be more or less danger from septic material in the cervical canal, and although one may cauterize by the very best methods, pus may result. Again, I do not close the vaginal opening so completely as to prevent serous drainage between the sutures. And in as much as I rarely use drainage in any other form, I am sure that this proves sufficient. In all cases the utmost care is taken before operation to render the vagina as aseptic as possible. I also instruct nurses to use a douche (1,500 bichloride) every day so long as a discharge continues. Within a year past I have had no death from hysterectomy made for fibroid of the uterus—about 20 operations in all—nearly half have been complete, in the others some portion of the cervix has been left. The difference in rise of temperature, pain and other complications, has been very strikingly in favor of complete extirpation. The principal objections heretofore have been the increased length of time required to perform the operation, but my own experience confirms me in the belief that but little more time is required now than was formerly demanded in the partial removal. Having

the complete removal in view at the commencement, one can save time that was formerly spent in minor details of a different operation.

The difficulties of any hysterectomy come largely from complications that have arisen from delay—and this is especially true in making the complete removal. No uterus can long remain normal that contains a fibroid. Septic material may and frequently does extend into the fallopian tube, thence into the pelvic cavity, where peritonitis results in suppuration, exudate and adhesions that bind down the cervix, so that it becomes almost impossible to enucleate or dissect it out. This I have found a frequent complication. Fibroids become multiple, occupying all parts of the uterus and extending into and changing the position of the broad ligaments, displacing the ureters and fixing portions of the intestines by contact with the congested peritoneum. The whole circulation is modified and becomes pathological, the veins of the broad ligament are varicose, the tissues become friable, increasing the danger from hemorrhage during the process of removal. To my mind, the chief danger in long operations lies in the amount of blood lost, rather than any shock to the system otherwise. "Death from shock" when analyzed, as a rule, means death from hemorrhage. I speak from my own experience and observation of other operators. It is not a mere theory I have formed, but comes, as all theories in practical surgery should come, from practical work.

It is often said, especially by men who take what they term the "conservative" side of treatment of fibroids, that in a majority of cases, the patient goes through life and is not rendered invalid by the growth, but enjoys a degree of health and comfort that the average woman enjoys.

Most careful and searching inquiry, on my part, among such women, shows the reverse of this to be true. First of all, the knowledge of such an unnatural growth is a constant source of anxiety and worry of mind, which is worse than physical suffering. The dread of some complication is always before them, to say nothing of the disagreeable deformity that they cause after they are large enough to rise above the pubes. In the case of an unmarried woman the last named feature becomes exceedingly annoying. Add to this the well-marked invalids that are barely unable to take life's burdens and cares, or even to be free from daily suffering, we have a factor that weighs much against the slight risk of hysterectomy.

Homans, in an article published in the *Boston Medical and Sur*

gical Journal, March 7th ult. speaks more strongly than ever before in favor of the operation. He gives eleven reasons why he advises operation, while practically he gives but one reason for not operating—viz.: when the tumor gives no trouble, uneasiness or disturbance and the patient does not desire its removal. The last part of this reason always settles the matter, while the first part, in my experience is extremely rare. He adds "but I operate more frequently than I used to." Out of 650 fibroids he had seen he operated upon 93, but says "I should have done well to have operated upon a greater proportion of them." He estimates that the "mortality from all cases promising or unpromising varies from three to ten per cent."

Following the rule I have laid down, "to operate in all cases as early as discovered" and by "*complete hysterectomy*," in my opinion the mortality will be no more than the minimum—three per cent. Can we ask more than this for abdominal section for any cause.

Left until an absolute necessity compels the operation (as claimed by our "conservative" (?) friends) we will find a mortality far exceeding the maximum, to say nothing of the dangers from death by hemorrhage and peritonitis, and the years of physical and mental suffering. There will always be a certain per centage of cases that will undergo malignant and other degenerations and complications that will render impossible any attempt even at removal.

The size of a tumor is by no means the measure of the suffering it may occasion, the largest oftentimes being less troublesome than small ones. I have within a few weeks removed a uterus containing two fibroids no larger than acorns. They had caused hyperplasia of the corpus and a complete and very sharp retroflexion. The woman had been an invalid for years and I proposed ventro-fixation to relieve the displacement, to which she assented. Exploratory incision showed the true condition and I made hysterectomy. I have no doubt of its complete success as far as restoring her to health and comfort.

Another case a week later showed three very small tumors, so placed in the pelvis as to render an operation very difficult and dangerous. Pressure upon the uterus had produced much atrophy of the organ and the function had become considerably impaired and the lady had been an invalid to the extent of depriving her of all social privileges and enjoyment for many years. Yet the largest of these fibroids was no more than two inches in diameter—rapid and uneventful recovery followed. I have no doubt as to complete recovery of health in this case.

These are only samples of many such cases, that occur under the eyes of frequent operators. As this paper is merely a brief summing up of my own experience, I forbear quoting at any length from any authorities. The journals are full of articles bearing upon this subject. Homans says "I doubt if one man could read in a day the communications published during 24 hours on this operation." All this shows the manifest interest in the subject. The profession seems fully awake to it and hasten to put themselves on record in favor rather than against surgical interference. Judging from all these indications one must be led to believe that hysterectomy for uterine fibroids, as a rule, has come to stay, and that a much greater percentage than "ten" will be removed in this way, whether it is best or not. If the "education" in this direction does not result in tempting men who have not had experience in abdominal surgery for other causes, many a suffering woman will be relieved.

That the operation is much more difficult than abdominal cases generally, I think will be readily granted by men of large experience. Especially is this true in cases of long standing, where adhesions and complications exist—then indeed it becomes actual manual labor. Almost every man has his own method of operating. I have never changed mine since I adopted the *continuous suture with catgut* about twelve years ago. So far as I know no one who has written on the technique of the operation has ever adopted this method. Most men seem afraid of the catgut suture. Since 1884 I have used no silk, silver wire, or any form of suture or ligature aside from catgut in the abdominal cavity or out of it, with the single exception of silk worm gut for closing abdominal wounds. I have never regretted its use and have had, in my opinion, no unpleasant results, which would not have occurred with any other form of suture or ligature. With well prepared catgut I feel the utmost safety both as regards sepsis and freedom from hemorrhages after operation. It has a special advantage over many other forms of ligature, in that you can use it freely by continuous suture, when the same amount of silk would be a great objection. In this special operation after placing a long clamp beneath the ovary and tube, with a strong curved needle threaded with No. 4 or 5 catgut I ligate a portion of the broad ligament an inch below the clamp, carefully fastening by over and over sewing this part. I then cut between the clamp and ligature, and as fast as I cut continue the over and over suture, always

keeping one loop ahead of the knife or scissors. In this way I close the broad ligament as soon as cut. When I have divided the broad ligament down as far as the uterine artery, and before cutting it, I carry an incision around the uterus in line with the last suture, through the peritoneum which I dissect off in front and behind, continuing the suture as before, this includes the uterine artery, and no blood is lost in the average case, where the tissues are not impaired in their integrity. A little care and patience soon relieves the cervix and by that time the continuous suture has nearly closed the vaginal opening, so far as I care to do so.

As I said in a former paper I had tried the various other methods of hysterectomy but at last settled on this, which I find much easier than any other I know at present.

The advantages I claim for it are—1st. In my hands it is easier to do than any other method. 2d. By using catgut one has less fear of strangulating the tissues, on account of its elasticity. 3d. By the continuous suture one can always have the blood vessels under control by carrying a loop of the suture below the point of division, before cutting the vessel. 4th. If tissues are weak and fragile from inflammatory action, the catgut suture can be used in any direction and to almost any extent, in the event of annoying bleeding. 5th. Absorption of catgut always takes place, so that there is much less danger from fistulæ following, which so often occur when silk is left in the pelvic and abdominal cavity. 6th. In my experience, no casualties have followed its use that may not have followed any kind of suture.

Many operators can possibly remove the uterus more rapidly by their own methods, but the time necessary to secure all bleeding vessels and completing the toilet will make the entire operation as long as mine. When I take my last suture the vessels are all secure and the rest is rapidly finished. I have seen the uterus removed in ten minutes, but from half an hour to an hour was spent in getting the patient ready for bed. This I call "playing to the galleries" and is not scientific surgery. I find very little trouble from prolonged operations, provided hemorrhage is avoided and prevented—with plenty of gauze and hot towels the intestines can be kept warm and no shock follows from even hours of exposure.

In conclusion, I can only say, that further experience and careful observation justifies me in re-asserting my belief, so strongly expressed two years ago, that in all cases where a woman finds herself an invalid

from a fibroid uterus, to the extent of seeking the advice of a surgeon, unless such tumor can safely and easily be removed per vaginam, either by enucleation or morcellment, that true conservative surgery demands hysterectomy, and in my experience I have found the abdominal method by far the preferable one.

I expect criticism upon my method of operating by continuous suture with *cat gut* as the material. I think I may safely say that it is entirely original with me, and therefore I am perfectly willing to submit to whatever discredit attaches to the method. It has served me well for ten years, at least, and several of my friends in the profession are abundantly satisfied with it.

THE WOOD CORSET, WITH IMPROVEMENTS, FOR THE TREATMENT OF LATERAL CURV- ATURE AND POTT'S DISEASE OF THE SPINE.

By A. M. PHELPS, M. D., New York.

The question of a suitable spinal support in lateral curvature of the spino and convalescent cases of Pott's disease has been before the profession from the earliest time, and not until Dr. Sayre devised the plaster-of-Paris corset did we have a brace that accomplished nearly all that is desired in a support.

The plaster-of-Paris corset I believe to be one of the most efficient of supports. It certainly has the advantage of cheapness, and is well adapted for use in clinics and dispensary practice. It has, however, the disadvantage of weight. Steel braces have been made. Many of them, when suitably applied, furnish very good results. Dr. Vance constructed, to take the place of the plaster-of-Paris corset, a paper corset.

If the profession could have at their disposal a corset which combines strength, durability, porosity, and lightness, it would meet a long-felt want. I had heard something of the wood corset but knew nothing of its construction. Therefore, a few years ago I visited Europe for the

express purpose of learning the details of its construction. On my return, I presented the corset at the New York Academy of Medicine, Surgical Section.

I visited Dr. Waltuck, of Odessa, Russia, and from him personally I learned the details, after several days of hard work. I found that Professor Lorenze, of Vienna, had been using the corset for some time, and was much pleased with it. At that time, however, many of the corsets proved to be inefficient on account of errors in their construction. We have used the corset constantly since that time, and with the modifications which we have made, it is the most efficient, comfortable, and suitable spinal brace that I know of.

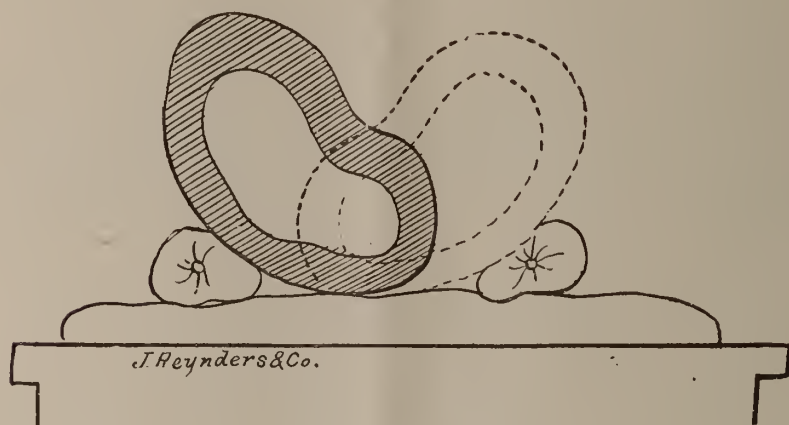


Fig. 1.

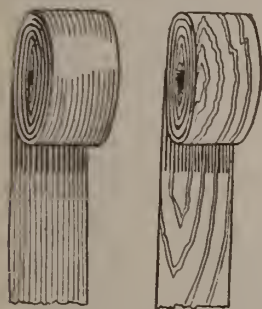
It has been with the greatest difficulty that we have succeeded in getting the proper materials for constructing the corset, and even now it is cheaper and better to import the wood from Vienna. The spruce timber which grows there makes a better shaving than any timber that we have attempted to use which grows in America. It is tougher, and works better with the glue.

The materials necessary for making the wood corset are: One dozen plaster-of-Paris bandages; one tight-fitting shirt, fifty pounds plaster-of-Paris, two pounds oakum, two yards of raw unbleached linen, a blue pencil, one pound of Cologne glue, a little glycerine, a knife for splitting wood, a glue-pot, a hammer, a large clothes brush, some towels, two sand-bags, a quantity of wood shavings, some shellac, an

eyelet punch, a number of eyelets, and hook lacings, and two yards of knitted shirting.

All of these articles are kept in stock by Messrs. John Reynders & Co., 303 Fourth Avenue, New York, who have kindly imported for me such materials as could not be procured in New York.

THE DETAILS OF THE WORK.—Suspend the patient after the tight-fitting shirt has been applied. Indicate with the blue pencil mark around the body on the shirt, the length of the corset desired. Apply the plaster-of-Paris bandages as in making an ordinary plaster-of-Paris corset. When the plaster is set, remove it from the body by cutting it down in front. Strip out the shirt from the corset, when the blue pencil marks will be seen on the inside of the plaster corset. A few turns of the plaster bandage around the plaster corset is necessary. Put in a large dish a quantity of oakum picked up finely. Mix with this a quantity of plaster-of-Paris. After having greased the inside of the corset with vaseline, stir water into the plaster-of-Paris and oakum until it is of the consistency of thick mud. Apply this over the inside of the corset to the thickness of three inches. After it is set, remove the corset, and a perfect cast of the body will be the result. The blue line will be transferred from the plaster mould to the cast. The oakum is put in the plaster to facilitate the modelling, and also to make the cast tough, because considerable hammering has to be done upon it. The cast should dry two or three days in a temperature not exceeding one hundred and fifty degrees. Any imperfection in the cast should be



J. Reynders & Co.

Fig. 2.

Fig. 3.

remedied with plaster-of-Paris, building out such points over the breast and hips and deformed portions as may seem necessary to make an artistic corset. Cover the cast with raw linen which has been wet for the purpose. Some difficulty will be experienced unless the workman has seen the work done. The cast is placed on a table with the sandbags, as seen in Fig. 1.

The wood from which the corset is made is taken from the edge of a plank the grain of which is as seen in Fig. 2. Fig. 3 shows imperfect grain. The grain running as in Fig. 2 makes a tough strip that will bend as seen in Fig. 4. When the grain runs as in Figs. 6 and 7 and the wood is

bent, it will present the appearance of Fig. 5, which has an element of weakness.

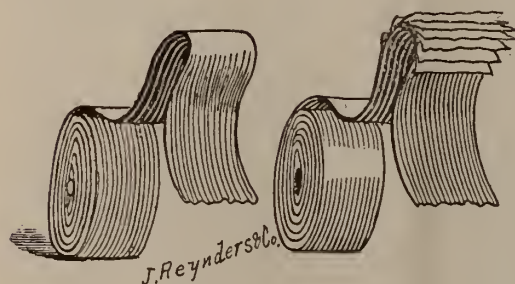


Fig. 4.

Fig. 5.

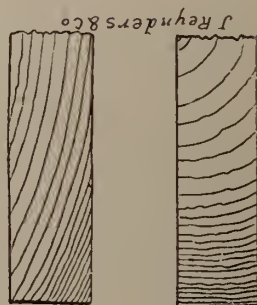


Fig. 6.

Fig. 7.

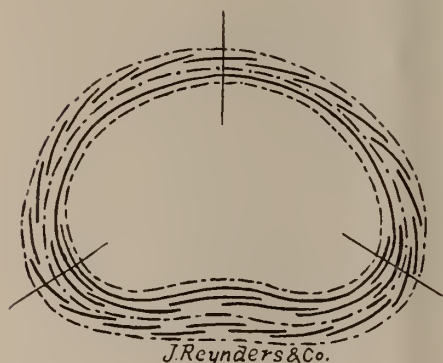


Fig. 8.

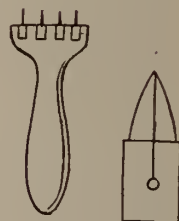


Fig. 9.

The layers of wood and linen are explained in Fig. 8, the dotted lines being linen, the black lines wood, and it will be seen that there are three layers of linen and two of wood in the front of the corset, with three layers of linen and three layers of wood in the back and side.

Over the hips extra pieces are put in, making it even thicker, which will be explained later.

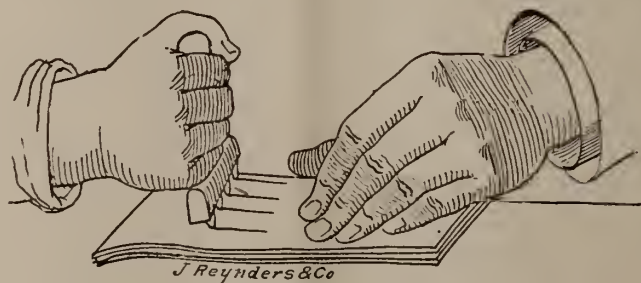


Fig. 10.

The cast is now laid with the back up. Draw three longitudinal lines, one in the centre in front, and one on each side, dividing the cast into three equal parts. Cut several strips of wood in lengths long enough to overlap the lateral lines two inches.

With the tool, Fig. 9, split the ends of the wood as seen in Figs.

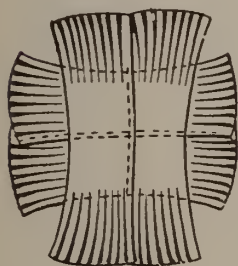


Fig. 11.

10 and 11. The object of this is to allow the ends of the wood to spread or to overlap, so as to fit all inequalities, as seen in Figs. 11, 12, 13, 14 and 15. Prepare the glue by soaking it in water over night, then melt it. To a pot (holding one quart) of glue, add one tablespoonful glycerine.

Dip the glue-brush into the glue, wiping it as dry as possible on the edge of the pot so as to use the least possible quantity.

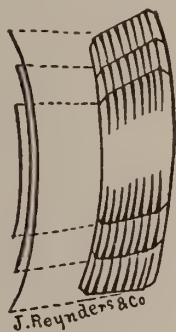


Fig. 12.

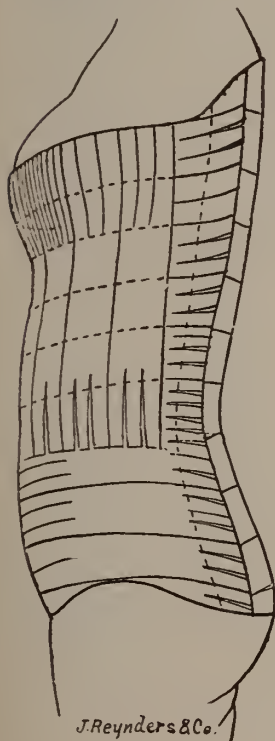


Fig. 13.



Fig. 14.



Fig. 15.

A strip of wood is covered with glue, and the brush drawn along the part of the cast where the wood is to be laid, beginning at the top of the cast with a traverse layer; strip after strip is applied, and overlapping the strip above one-eighth of an inch. Cover this layer of wood with the linen and glue, and hammer the whole together. Turn the cast on the side, and working from the centre in front, put the strips on horizontally, overlapping the strips already on, two inches. Cover this with linen, lapping on the back two inches. Finish the opposite side in the same manner. See Fig. 16.

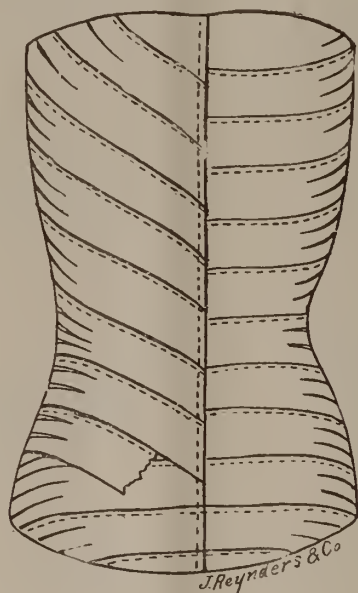


Fig. 16.

Beginning in the back, put on the strips longitudinally, overlapping four inches in the centre of the cast from the top and bottom. See Figs. 18 and 19, left side.

Hammer the wood well together with an ordinary shoemaker's hammer. Now stay the corset with wood, as seen in Figs. 17 and 18, over the hips, and also strengthen the corset by putting on another layer of wood diagonally from the shoulder to the opposite hip, meeting at a point in the centre of the waist. Cover the entire work with linen, putting the least amount of glue on the wood before the linen is applied. After twenty-four hours the corset can be removed from the cast, fitted to the patient, and sent to the trimmer who will treat it in

the following manner. Corsets made according to the method followed at the time I observed the process were not as perfect as they should be.

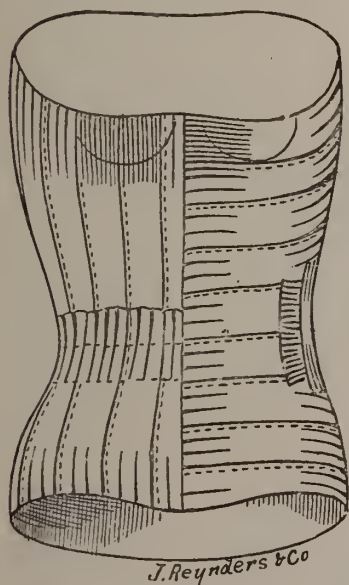


Fig. 18.

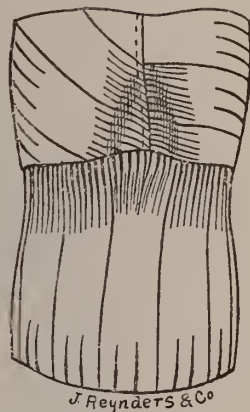


Fig. 19.



Fig. 20.

1. The slightest excess of glue moistened by the perspiration of the body coming into contact with the shirt or the skin, was exceedingly disagreeable. 2. The perforations in this corset weakened them, and allowed the glue to exude during perspiration.

To obviate all this, I had the corset perforated, as seen in Fig. 20, in which perforation eyelets are punched. A special machine facilitates the perforating and the punching of the eyelets. The lacings are stitched on as in Fig. 20. Trim the top and bottom with kid. The entire corset is shellaced inside and outside with two or three coats of shellac, which renders it impervious to moisture, the eyelets ventilating it perfectly.

A corset made as I have described, it will be observed, differs from that

of Dr. Waltuck in the layers applied as seen in Fig. 18. Is no better, but somewhat easier to make.

The improvements which I have made in the corset, consist in

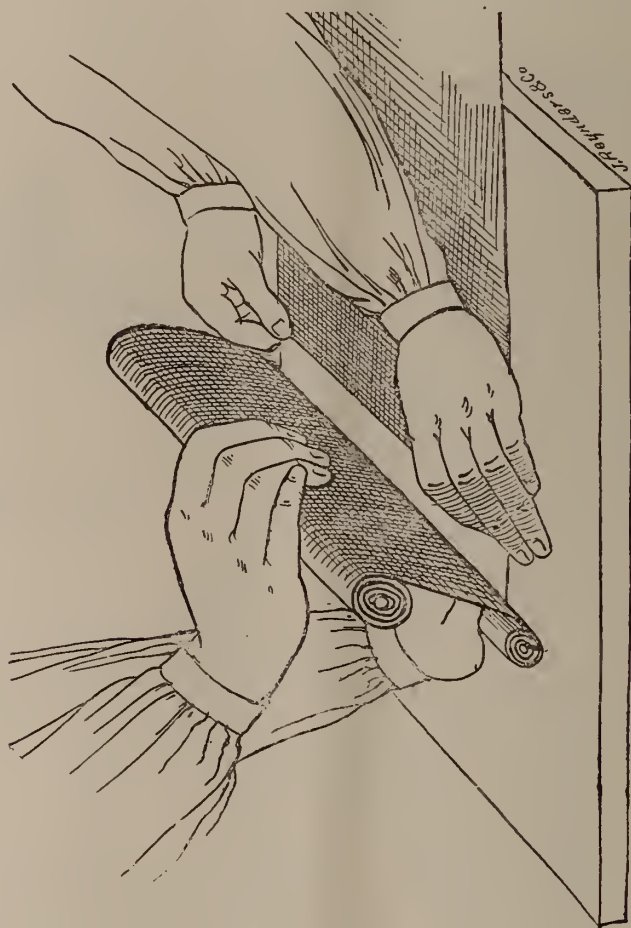


Fig. 21.

shellacing it on the inside and outside, and putting in the eyelet holes, eyelets, which add to the strength of the corset and ventilate it perfectly.

An ordinary corset, for an adult, weighs from one to one and a half pounds. They are very durable, very comfortable to wear, and thus far I believe that they are the best spinal braces yet devised.

I have made from the paper used in the manufacture of boats, a corset which answers the purpose equally as well as the wood corset.

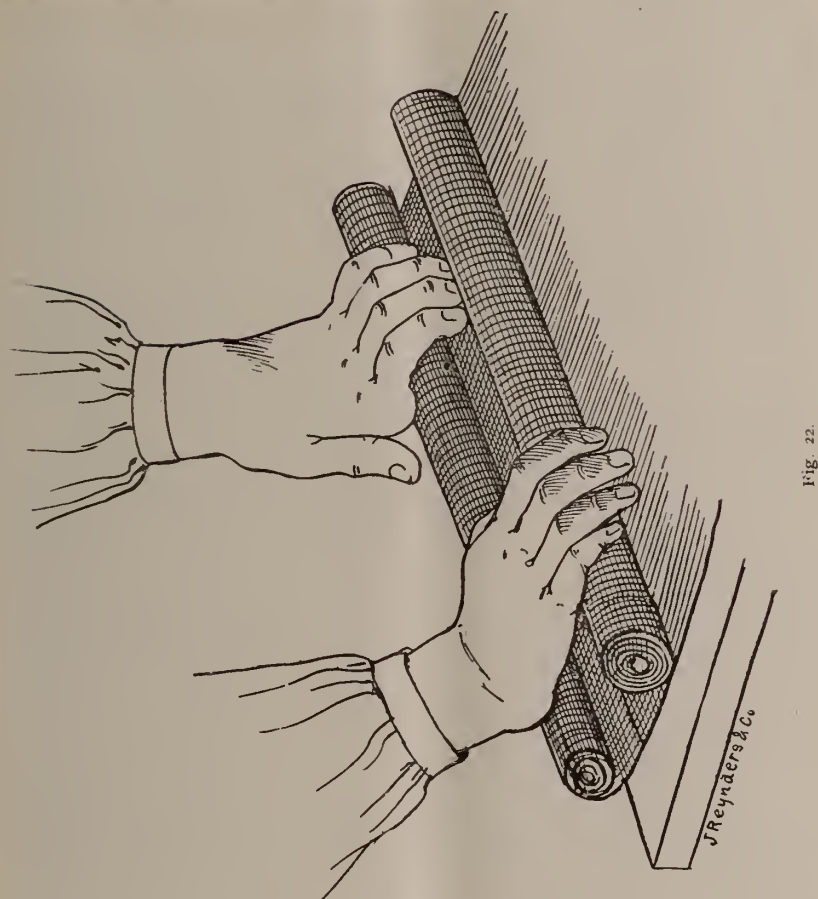


Fig. 22.

It is much lighter, and seems to be as durable, and I am not sure but it will take the place of the wood corset. Time will determine. The process of making the paper corset is similar to that of making the wood corset, so far as making the cast is concerned, after which the cast is sent to the paper-boat manufacturer, who applies the paper according to the process employed in making boats.

Another use to which the wood shavings are applied is in working them with plaster-of-Paris in the treatment of fractures of osteotomies or excision of joints. Being thin and narrow, they admirably adapt themselves to the parts, and the plaster-of-Paris holding them in place, they fit more accurately than any mechanic could shape a solid piece of wood to fit.

Again roll two layers of crinoline, between which wood strips have been placed, as shown in Figs. 21 and 22. Roll up four yards of this, as seen in Fig. 22. With a saw, cut this into rolls four inches in length. Immerse one of these bandages in water, and it will be found an admirable dressing when applied to a limb in cases of joint disease, or where a slight support is required to hold a limb in a proper position. The starch of the bandage soon hardens, so that we really have a starch bandage reinforced by wood shaving.

There are many cases in surgery where this bandage can be used to great advantage, and applied over surgical dressings it takes the place of plaster-of-Paris. It is light and just as strong as plaster-of-Paris, and it has the advantage over the starch bandage of keeping its position after it is applied, even before it is dry.

The corset is somewhat difficult to make. It requires a good worker in wood and glue, and a plant for doing the work.

It would hardly pay a general practitioner, who possibly would not use more than four or five corsets during the year, to go to the trouble and expense of making his own corset. If those gentlemen who desire to use the corset will make a plaster-of-Paris corset as described in the beginning of this paper, and send it to the workshop of the Post-Graduate School and Hospital, the men there will make the corset, and Messrs. John Reynders & Co., will satisfactorily trim it.

I will say, by way of parenthesis, that the corsets, when completed, can be covered with silk or with stockinet, or they can be left in the linen finish. They are not so warm for summer use in the linen finish.

THE NEW HAMPSHIRE MEDICAL SOCIETY MEETING.

The One Hundred and Fourth Annual Meeting was held in Concord, June 3 and 4, 1895. After being called to order by the President Dr. David P. Goodhue, prayer was offered by the Chaplain, Rev. Howard P. Hill of Concord, and the usual routine of business occupied the attention of the Association for a short time.

The remainder of the forenoon and the entire afternoon session was occupied with the presentation of medical papers and discussions thereon. The programme held the attention of the members and was discussed in such a manner as to be of profit to all.

At the close of the session, June 3d, the Alumni of Dartmouth Medical College, that are members of the New Hampshire Medical Society, retired to the banquet room of the Association of Red Men, and spent two and one-half hours in a business meeting and banquet.

The second day's session of the New Hampshire Medical Society opened Tuesday morning at 8.30, and in the absence of the President, Dr. E. F. McQuesten, Vice-president, presided until the arrival of Dr. Goodhue.

During the first hour matters of business received attention.

On recommendation of the council, the following new members were admitted: Drs. Byron D. Pease, Greenville; Anna M. Littlefield, New London; H. B. Stickney, Newport; Albion S. Marden, Newport; George S. Hazzard, Hollis; E. B. Andrews, Ossipee; Caroline M. Richards, Manchester; E. E. Dean, Lebanon; H. C. Emerson, Concord; Geo. M. Watson, Haverhill; Henry T. Fontaine, Wm. H. Mitchell, Suncook; Frederick S. Towle, Portsmouth. On recommendation of the Executive Committee, Dr. Jo H. Linsley of Burlington, Vt., was elected an honorary member of the Society, which with a vote of thanks of the Society, was an acknowledgment that his illustrated lecture on bacteriology the evening previous was fully appreciated.

The report of the treasurer showed receipts of \$1,330.05; expenditures, \$1,200.99, balance on hand, \$129.96.

The trustees reported invested funds on hand of \$4,200.81.

Officers were elected as follows: President, Dr. E. F. McQuestion, Nashua; vice-president, Dr. A. P. Richardson, Walpole; treasurer, Dr. M. H. Felt, Hillsboro; secretary, Dr. G. P. Conn, Concord; executive committee, Drs. Charles R. Walker, Concord; Geo. D. Towne, Manchester; F. A. Stillings, Concord; W. F. Smith, Hanover; F. E. Kirtledge, Nashua.

Anniversary chairman, Dr. A. N. Smith, Dover.

Committee of arrangements—Drs. Stillings, Sullivan, Day, Lovejoy, McMurphy, Adams, Concord.

Delegates to State societies—Maine, Drs. Frink of Bartlett, Mitchell of Lancaster.

Vermont, Drs. Smith of Hanover, Lampson of Scytheville.

Rhode Island, Drs. Wallace and Greeley, Nashua.

Massachusetts, Drs. Antoine and Kittredge, Nashua.

Connecticut, Drs. Russell of Concord, Prouty of Keene.

At the conclusion of the business session the regular order of papers and discussion was taken up as follows:

Dissertation, "On Bacteriological Diagnosis of Diphtheria;" by Herbert C. Emerson, M. D., Concord.

Report, "Serum Treatment of Diphtheria," by C. P. Frost, M. D.; discussion opened by D. Edward Sullivan, M. D., Concord.

Report, "On Modern Methods of Treating Diseases of the Nose and Throat," by O. B. Douglass, M. D., New York: discussion opened by Thomas Hiland, M. D., Concord.

Dissertation, "On the Physical Basis of Crime," by John J. Berry, M. D., Portsmouth: discussion opened by C. P. Bancroft, M. D., Concord.

Essay, "Conservatism in Medicine and Surgery," by G. P. Conn, M. D., Concord; discussion opened by Chas. R. Walker, M. D., Concord.

At noon President Goodhue delivered the annual address. It was a remarkably able and interesting paper and held the closest attention of all.

At the close the new officers were introduced and one of the best meetings in the history of the society was brought to a close.

The anniversary banquet was served at the Eagle at 1 p. m., and nearly 100 sat down to the elegantly appointed tables. Dr. Robert Burns of Plymouth presided, and the guests of honor were Gov. Busiel,

Drs. Foster and Douglass of New York, and Drs. Morgan, Lee and Warren, representing Maine, Vermont and Massachusetts Medical societies. Following the banquet there were interesting post-prandial exercises.

THE DIAGNOSIS AND TREATMENT OF GONORRHOEA.

BY WILLIAM WARREN TOWNSEND, M. D.

RUTLAND, VT.

Considering the fact that so many so-called "new doses" of gonorrhœa are acute exacerbations of old chronic cases, and taking into mind the sometimes negligent treatment given to urethritis by the general practitioner, I propose to give in a somewhat superficial way a few points that will aid in the diagnosis and treatment of this common disease.

Perhaps it would be well to refresh our anatomy of the parts involved.

The penis is composed of the corpora cavernosa and corpus spongiosum, being three separate bodies divided by fibrous septum.

The corpora cavernosa are attached to the rami of the pubes, and the corpus spongiosum ends in a bulb posteriorly and a cap like process (glands penis) anteriorly. All three bodies are composed of erectile tissue, and the corpus spongiosum, containing as it does the urethra, is the most important body for us to consider in the discussion of urethritis. The urethra is a closed canal contained in the corpus spongiosum and extends from the bladder to the meatus urinarius. It is divided into three portions, the spongy or penile, membranous and prostatic. The spongy is that portion anterior to the cut-off muscle (compressor urethræ). The membranous is all that portion between the anterior and posterior layers of the deep perineal fascia. The prostatic is that portion contained in the prostate gland. The urethra is lined with cylindrical and squamous epithelium external to which is a layer of circular and longitudinal muscular fibers. Imbedded in the mucous membrane are numerous small racemose glands, the glands of Littre. Besides these there are the larger lacunae, whose openings

point towards the meatus. In the upper part of the fossa navicularis we have the lacuna magna. Situated between the anterior and posterior layers of the triangular ligament and supported on the anterior layer lie Cowper's glands, one on each side of the urethra. The ducts open in the floor of the bulbous urethra by two small oblique openings.

Beginning in the prostatic urethra the points of interest to us are the verumontanum, sinus pocularis, and openings of the ejaculatory ducts. The membranous portion presents nothing of interest. The penile or spongy portion presents the fossa navicularis, which is a marked dilatation of the canal. It is impossible to give the caliber of the urethra. This is a question about which there is considerable controversy among genito-urinary surgeons. The relative dilatability is more important. The meatus is the least dilatable and will usually accept a 24 French sound. The fossa navicularis is spindle-shaped. The urethra is then uniform until we reach the membranous portion. Then lastly we have another spindle-shaped portion, the prostatic. As will be observed the urethra presents a succession of dilatations and contractions.

Acute urethritis is an inflammation of the urethral mucous membrane, and is characterized by a purulent discharge and painful micturition. It is a disease of great antiquity, having been mentioned in the writings of Celsus and Hippocrates. By these early writers it was regarded as a disease of the secretory apparatus, producing an excessive flow of semen. Hence the misnomer, gonorrhœa. For more than two hundred years, in the 15th century, gonorrhœa and syphilis were associated together from the fact that both were contracted from sexual contact. As is well known, John Hunter inoculated himself with the pus from a person suffering from urethritis. Unfortunately the same person was a syphilitic, hence a resulting chancre confused the diseases for nearly half a century. It fell upon Ricord to finally clear up the non-identity of syphilis and gonorrhœa.

The urethra, not unlike other organs and tissues of the body, may become the seat of a variety of inflammations. Some cases present distressing symptoms, lasting from four to six weeks, while others clear up in as many days. The cases presenting the severer symptoms are generally supposed to be due to a specific virus, while those cases that present milder symptoms are often due to an irritating vaginal secretion. This irritating vaginal secretion coming in contact with an already diseased urethra will start a purulent discharge, which is often

mistaken for a new attack. Excessive sexual relations or an over-indulgence in alcoholic beverages will often times start a discharge from those suffering from sub-acute urethritis or a peri-urethritis. Syphilitic mucous patches, tubercular ulceration, rheumatism, and gout are often times valuable factors in the causation of discharges from the urethra. The question often arises "Can two perfectly healthy persons by excessive sexual indulgence give themselves urethritis?" No less an authority than Ricord answers this in the affirmative, but I think taking into consideration the fact that as by the general usage of the term urethritis, gonorrhœa is meant, and as we understand gonorrhœa to mean a specific inflammation due to a certain virus, there is considerable room for argument.

Dr. W. R. Pryor in his excellent article in the March number of the "Journal of Cutaneous and Genito-Urinary Diseases" shows us by the examination of a number of women that the gonococci were present in a large majority of those examined, and that there were no external manifestations or disagreeable symptoms presented by their presence. Hence there was a latent gonorrhœal process present which was sufficient to excite a discharge in the urethra of the male who co-habited with them. This will explain a number of so-called "strains." The question of the cause of specific urethritis has been partially explained by the discovery in 1879 of the gonococcus of Neisser. This discovery has been confirmed by a number of bacteriological investigators, although a false gonococcus has been demonstrated. A perfect knowledge of the gonococcus is still embryonic and little is really known of the micro-organism. Mediate infection of urethritis is possible, but infection by sexual contact is the most common mode. The period of incubation in specific urethritis varies from one to fourteen days and is dependent to a certain extent upon the general condition of the patient. In a vast majority of the cases the symptoms present themselves about the third day, and two-thirds of the cases during the first week. The pathology as set forth by Bumm is as follows: "The secretion containing the gonococci finds its way into the urethra and lodges in the fossa navicularis. The gonococci burrow through the superficial layer of epithelium to the sub-epithelial tissue and by their presence set up a hyperemia. The capillaries become engorged, the mucous membrane red and swollen and secreting a muco-purulent discharge containing dead epithelium which leave erosions that finally granulate up and become covered with new epithelium upon the subsidence of these

symptoms. The glands and ducts resolve more slowly and the disease often times exists in these after a complete cessation in the urethra.

The question of diagnosis when a patient presents himself with a urethral discharge often times is a difficult one and is one upon which a physician should exercise the utmost care, as often the happiness of two people is at stake and the physician may be the means of breaking up a family unjustly, and, may be the means of bringing a guilty partner in wedlock to justice. In differentiating the different forms of urethritis, the microscope with the clinical symptoms presents to us a means which is accurate. In considering a urethral discharge the first question that confronts us is "Is this discharge a specific one or one due to contamination with menstrual, leucorrhœal, or carcinomatous discharge?" The question is readily settled by considering the presence of gonococci with the microscope, the period of incubation, and the severity of the clinical symptoms, and lastly the duration of the attack. Acute exacerbations of chronic latent urethritis are often mistaken for new attacks both by the physician and the patient. These can usually be diagnosticated by their not having a definite period of incubation, the history of previous attacks, and being as a rule associated with a debauch. The cessation of a discharge by no means indicates a complete recovery from the disease. Very often chronic urethritis may exist and is limited to one or more granular patches, or posterior to the cut-off muscle, when the discharge instead of making its exit at the meatus backs into the bladder and is discovered by Prof. Volkman's two-glass test and by the presence of gonorrhœal shreds. Traumatic and chemical urethritis is diagnosticated readily with the history given. Chancroidal ulcers and initial lesions of syphilis are easily recognized as they are usually situated just within the meatus. Quite often during the early secondary stage of syphilis a mucous or muco-purulent discharge is occasionally present due to mucous patches in the deeper part of the canal. But with the syphilitic history this condition may be suspected. We now come to the question of prognosis. Not one of us has ever come in contact with a patient but whom puts the question "Doctor, when am I going to get over this?" Now if you are thoroughly satisfied that the case is a specific one you will be perfectly safe in replying "Not before six weeks, possibly longer." How many of you would tell this to your patients? I am happy to say the laity are beginning to understand more about urethritis than they

did and now the statement to the effect that they would as "leave have it as a hard cold" is not made so often.

The prognosis as to life is good, as few cases succumb unless they be physical wrecks and are unable to withstand the complications.

The treatment of urethritis has been until recent years empirical, and almost all the astringents have been used to "dry up the discharge" and without thinking of the after complications.

When a patient presents himself to you the first thing to do is to determine whether or no you have to do with a specific or a non-specific urethritis, not that it makes any material difference in the treatment but it does in the prognosis, and this is always a matter of great importance to the unfortunate. After having satisfied yourself as to the character of the inflammation you impress upon the patient the necessity of following out your instructions. Interdict the use of all alcoholic beverages, tea, coffee and red meats, asparagus and the condiments. Advise the use of alkaline waters, or if not convenient, plenty of good water will answer the purpose, the object being to flush out the genito-urinary tract. During the first day or so there is considerable ardor-urinae. This is generally controlled by the alkaline salts and by the submergence of the penis in hot water during micturition and several times a day. During the acute symptoms of the first few days avoid all hand injections and instrumentation, and with the subsidence of the acute symptoms you can begin the injection, or what is better, were the patient able to see you every day, the retrojection treatment, which is accomplished as follows: Procure a soft rubber catheter, a No. 5 or No. 7 French, and an ordinary two ounce hard rubber syringe. Instruct the patient to stand in front of you holding a vessel in front of him. Lubricate the catheter with Albolene or Glymol (glycerine being too irritating) and pass back to the compressor urethrae muscle, then inject your fluid slowly. The same will run out, flushing the urethra from behind forward. The best solutions to use are those containing Potassium-perman, Listerine, Alum, Zinc, Argentum-nit., Icthyol, or any other mild astringent. During the stage of retrojection, I should give the balsanics internally, Cubebs, Copaiba, or Sandal Wood. After a number of retrojections the discharge will be changed in character and instead of a thick, creamy, purulent discharge, a mucous drop will appear and there will be a subsidence of all the painful symptoms. Now is the time to give the patient a hand injection with instructions how to

use it. Following out this treatment will generally control an ordinary case of Urethritis. The so-called abortive, bichloride and expectant treatments have all had their day. The bichloride treatment is practiced at present by a number of eminent genito-urinary surgeons. The abortive treatments of which there are several, are heroic, and the number of cases that fail to be aborted outnumber those that are, and from the fact that those cases in which it is practiced run such a severe inflammatory course, it should be condemned. The expectant treatment of the French genito-urinary surgeons is to be condemned from the mere fact of its being a negligent treatment. Of all the complications of Urethritis which is really not a complication but a normal extension of an inflammation, posterior urethritis is most common. It makes its appearance usually during the second week and is accompanied with a number of disagreeable symptoms, the foremost of which is a marked frequency of micturition, pain and heat in the perineum. The frequent micturition is due to an extension of the inflammation into the prostatic urethra, relaxation of the prostatic sphincter and hence the dribbling of urine into the prostatic urethra, which excites reflex spasm, hence urination.

The most accurate means of diagnosing posterior urethritis is by means of Prof. Ultzman's two glass test, which is based on the fact that pus generating from an inflammation in the anterior urethra escapes at the meatus, and pus generating from an inflammation in the posterior urethra being unable to pass through the compressor urethra muscle, wells back into the bladder, hence the urine contained in the first glass contains part of the contents of the bladder plus the washing from the anterior urethra, whereas that in the second glass contains that which was in the bladder minus the washings from the anterior urethra. Consequently in an anterior urethritis the urine in glass number one would contain pus and gonorrhœal shreds, whereas glass number two would be clear (excluding posterior gonorrhœa or suppurative lesions of the bladder or kidney) and in posterior urethritis both glasses would contain pus.

The treatment of posterior gonorrhœa consists in the irrigation of the posterior urethra and deep instillations of *Argentum-nitras* if the symptoms are severe. The next most frequent complication of gonorrhœa and one which accompanies posterior urethritis, is epididymitis and orcho-epididymitis. The pain is severe and the diagnosis is easily

made. Treatment consists in the proper suspension of the scrotum and the application of cooling lotions and of the actual cautery. Inflammatory balanitis and balano-posthitis are easily recognized. The treatment consists in cleanliness, and if proper prophylaxis is carried out these symptoms are rare.

Prostatitis, Folliculitis, Cowperitis, and Lymphangitis are frequent complications of Urethritis and sometimes very troublesome.

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*A Journal of Review, Reform and Progress in the
Medical Sciences.*

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EDITORIAL.

The following clipping is taken from the editorial column of the
Medical Examiner for June :

"Every young man, if possible, who intends to study medicine should spend a year or two in business as an educational procedure. He will make a better doctor and he will be enabled, in a measure, to meet the business man with business methods. It is this last of the first principles of business which enables the non-professional man to deceive the professional man in many ways, and especially in financial matters. It is not absolutely necessary that the business man should have a knowledge of medicine. Every physician knows that the man who knows more or less (and especially the latter) is a very troublesome patient. A business man does not need such knowledge, unless his business is connected with medicine."

We have read these few words with no little interest and satisfaction for they coincide exactly with our own views on this subject. The medical

student who has familiarized himself with business tactics before entering his professional life, will find success more certain and lasting. His ideas will be clearer and his methods more practical in every way. And aside from the personal advantage to be derived from a knowledge of business, his relations with his patients will certainly be more satisfactory. Sound business principles render a man in whatever occupation he may be, more liberal and cosmopolitan, and surely no profession requires greater polish of manners or liberality of views than that of medicine. The great fault of the medical student body seems to be a general lack of sociability. Not sociability in the sense of "hale fellow, well met," but especially in regard to polity. That is, his relations with the other members of the human family. In the past this no doubt has been due to lack of liberal education, for it is an absolute fact that medicine required less preparation than any other profession. But to-day now that the standard of our leading medical colleges has been elevated to its present status, why so many medical students disregard the little things that mark the gentleman, is beyond comprehension. As a general thing nearly all of them are workers and they certainly have more to do than students in the other professions. So possibly the little time medical students have for social intercourse, as well as the worry about passing examinations and getting through, accounts for their egotism. At any rate, the path of medical students is very unevenly strewn with roses and if the laity understood more of the vicissitudes of their life, we are sure that sweet charity would be in greater prominence.

MEDICAL ABSTRACTS.

TREATMENT OF APPARENT DEATH—Persons apparently dead from drowning, suffocation, anesthesia and other causes, including asphyxia neonatorum, may often be resuscitated when the case seems hopeless. Two methods not generally practiced are:

1st. Forcibly dilating the sphincter ani.

2d. Rhythmical traction upon the tongue. This, the method introduced by Laborde, of France, is the best method of artificial respiration that may be employed. Grasp the tongue with a towel or other suitable article and draw it back and forth rather forcibly, continuing until recovery or the certainty of death is established. Of course, other methods need not be neglected.—*Medical World*.

FIBROIDS.—In the treatment of women who refuse operative measures for uterine fibroids, Dr. Bloom recommends teaspoonful-doses of syrup of hydriodic acid, three times a day, in conjunction with a prescription containing potassium bromide and fluid extract of ergot. This treatment not only controls excessive menstruation, but it interferes with the nutrition of the fibroid, and there is necessarily a consequent diminution in the size of the tumor, as was noted in three cases within the year.—*Louisville Med. Monthly*.

GRAHAM BREAD.—The editor of *Modern Medicine* writes that true graham bread, that is, bread made with graham flour properly prepared, and not obtained by a simple mixture, is much more nutritive than ordinary bread. It is also more digestible for the reason that it is less fermented. It is more nourishing, containing a larger amount of proteid and fatty matters, and is of very great therapeutic service in the employment of a vegetarian regimen, since it enables us to increase the amount of proteid substances absorbed without having recourse to flesh foods. This is a valuable service which graham bread may render.—*Food*.

LEAD COLIC.—Dr. F. MacFarlan, of New York City (*American Therapist*), remarks that he has had great success in the treatment of lead colic by the internal administration of chloroform. He gives ten drops every half-hour if required. The pain is speedily relieved by the drug. The other features of the treatment go on in the usual way, such as the use of potassium iodide and laxatives. The chloroform is decidedly more effective in relieving the pain than the morphia, as a trial of the two remedies will abundantly prove. The speedier relief also favors a quicker and more satisfactory recovery.—*Medical Brief*.

DIFFERENCE BETWEEN ANÆMIA AND CHLOROSIS.—F. W. Warfvinge accentuates the importance of a clearer comprehension of chlorosis, as distinguished from the various forms of anæmia. He believes in its spontaneous origin, in its almost exclusive occurrence in females, and its appearance at the period of puberty. In fifty cases observed by him in the Sabbatsberg Hospital, some slight and some severe, the quantity of hæmoglobin was, without exception, much reduced—from 45 to 85 per cent., the average being 62.5 per cent. This diminution is, according to him, the predominant factor in the production of the disease. In only four cases were the number of red corpuscles normal (5.1 to 4.5 milligrammes), but in all others it was lowered (lowest, 1.6 milligrammes; average, 3.35 milligrammes), the reduction of the hæmoglobin being, therefore, proportionately much greater than that of the red blood-cells. In twenty cases of anæmia of advanced phthisis the number of the red blood-cells amounted, on an average, to 4.39 milligrammes, and the hæmoglobin to 80 per cent. Sixteen cases of chronic parenchymatous nephritis showed, on an average, 3.7 milligrammes of red blood-cells and 68 per cent. of hæmoglobin. In pernicious anæmia the hæmoglobin maintains a higher, or at least as high, an average as the red blood-cells, which is not the case in chlorosis.

These views of this distinguished physician, as reported by the *International Magazine*, are worthy of remembrance by the medical examiner.

IRRITATION OF THE NECK OF THE BLADDER DUE TO LARGE DOSES OF SODIUM BICARBONATE.—At a recent meeting of the "Société médicale des hôpitaux," a report of which appears in the *Journal des praticiens* for May 25th, M. Mathieu reported a case of inflammation of the neck of the bladder in a physician who had taken twenty grains of sodium bicarbonate every day for a month, and twenty-five grains a day for another month. During the second month he had shown symptoms of cystitis. On suppressing the use of the drug these symptoms had disappeared in two days, thus proving, said M. Mathieu, that it was not a case of true cystitis, but of irritation of the neck of the bladder. It was noticed that the urine remained acid during the treatment. M. Hayem remarked that he had never seen large doses of sodium bicarbonate cure excessive acidity of the stomach.

A short time since an informal reception was tendered the third year men and members of the faculty of the Medical College, U. V. M., by Dr. A. P. Grinnell, Dean of the College. The very pleasant occasion took place at the Howard Relief Hall and a most enjoyable time was experienced by all who attended.

Dr. Paul Plummer, late of the Mary Fletcher Hospital, Burlington, Vt., was married recently in Brooklyn.

Dr. F. W. Hewes, U. V. M. Medical College '94, is practicing in Groton, Ct.

NEWS, NOTES AND FORMULA.

Offensive odor of the breath may be overcome by the habitual use of eucalyptus and thymol antiseptic. Add a teaspoonful to a tumblerful of water for a mouth-wash and gargle. For bad breath caused by gaseous eructations of indigestion eucalyptus and thymol antiseptic is an excellent remedy, in doses of twenty to thirty drops in a little water.

TOOTHACHE.

- R. Dry alcoholic ex. opium, gr. viii.
Camphor, gr. viii.
Balsam Peru, gr. xvi.
Mastic, gr. xvi.
Chloroform, dr. iiss.

Introduced into the cavity, it calms the pain at once.

FOR FLATULENCE DUE TO FERMENTATION.

- R. Acidi sulph., fl. dr. jss.
Syr. zingiberis, fl. dr. vjss.
Aq. distil., fl. dr. j.

M. Sig. A teaspoonful.

LEMONADE FOR DIABETIC PATIENTS.

- R. Acid citric, 5 grm. (77 gr.)
Glyc. pur. 20-30 grm. (310-355 gr.)
Aquae purae, 1000 grms. (35½ oz.)

To be drunk in small quantities during the twenty-four hours.—*Medical Times and Gazette*

REMEDY FOR INSECT STINGS.

- R. Aq. ammoniae, m. cl.
Collodion, gr. l.
Acid salicylici, gr. v.

A few drops to be applied to each bite and sting.—*The Medical World*.

The application of carbonated waters to the eye in scrofulous ophthalmia will always relieve the pain and photophobia.

There is perhaps no one remedy which is so efficient in all cases of asthma, regardless of their source, as sodium iodide.

Chafing of infants is quickly cured by applying cotton that has been scorched to the parts. An absolute and quick cure.

Do not prescribe cocaine for frequent use in the eye. It causes exfoliation of the corneal epithelium, and favors destruction of its tissue.

A GOOD PURGATIVE PILL.

R. Aloin, gr. ss.
Extract. rhei, gr. ij.
Extract. hyoscyami, gr. j.
Olei cajeputi, gtt. j.

M. Sig. Take at bedtime.

Liquor sodæ is usually preferable to the potash for caustic purposes as it has less affinity for water, and its action does not extend so deeply into the tissues.

The application of iodine to the lining membrane of the uterus is, probably of all things, the surest means of counteracting a tendency to absorption of septic matter into the system after delivery.—*Medical Brief*.

At a recent clinic in the Mary Fletcher Hospital, Professor A. M. Phelps performed an excision of the knee in *ten minutes*. The case is doing well.

FOR BOILS.—Keep the boil covered with a compress of cotton-wool soaked in the following solution:

R. Chloral hydrat, dr. ii-ss.
Aquæ, Glycerine, aa. fl. dr. v. M.

A good prescription for sluggish conditions of the liver is the following:

R. Podophyllini, gr. $\frac{1}{4}$.
Euonyminae, gr. iss.
Ext. belladonnae, gr. $\frac{1}{4}$.
Pil. hydrarg., gr. ii.

For one pill: to be taken at bedtime.—*The Clinique*.

Creosote is said to be absorbed by the skin as readily as lanolin, and used in this way for pulmonary tuberculosis, it is said to be very efficacious.

When patients complain almost continuously of toothache or sensitive teeth, it is usually an indication to administer the phosphate of lime.—*Ex*.

PUBLISHER'S DEPARTMENT.

CLINICAL EXPERIENCES WITH SOLUTIONS OF
PYROZONE.

Dr. Geo. L. Parmele, of Hartford, Conn., says: "For about two years I have used pyrozone, and find it *indispensable*. The one point alone, of its remaining active and efficient after long standing open in the office, renders it vastly superior to ordinary peroxide of hydrogen. In the treatment of alveolar abscess, pus-secreting sockets and diseased antra, I find it of inestimable value. The 3 per cent. for cleansing the mouth, and the 5 per cent. for cases above mentioned. I have not as yet employed the caustic 25 per cent. solution.

The fact that I give this testimonial contrary to my usual custom, and unsolicited, will show you how highly I value pyrozone."

Fluid Extract of Kola is a valuable tonic stimulant, indicated in nervous depression. Unfortunately, however, it is acrid and bitter in taste, and taken in this form is decidedly unpalatable. Messrs. Frederick Stearns & Co., of Detroit, Mich., have, after considerable experimental investigation, devised a compound which they call "Stearns' Kola Cordial," which is one-fourth the strength of the Fluid Extract, each fluid ounce representing 120 grains of Kola (*Sterculia Acuminata*), but is free from the acrid bitterness of the drug. It possesses the agreeable odor and characteristic taste of true Kola, and as a stimulant is prompt and active.

Physicians desiring to test this new product will be forwarded sufficient samples for clinical test on request.

J. W. Snowden, M. D., A. E., San Jose, California, on April 12, 1895, writes: Your Bromidia acts like a charm. I believe it a safe, effectual and reliable Hypnotic.

Through the kindness of R. B. Stearns & Co. of Burlington, Vt., the members of the graduating class of the University of Vermont Medical Department,

have each received an elegant little leather pocket case from the establishment of W. H. Schieffelin & Co. of New York, containing samples of their soluble pills. The boys are very much pleased with the cases and fully appreciate the kind favor.

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This Antitoxin conforms to the conditions of the ordinance of the Board of Health of New York City, is absolutely sterile, and will be supplied in vials of 10 Cc. each.

Three grades of strength will be furnished.

1. A weaker serum which will contain 600 antitoxin units for immunizing purposes and for the treatment of mild cases. Issued under **blue label**; price per vial \$1.90, strictly net cash.

2. A stronger serum of 1000 antitoxin units for curative purposes—of sufficient strength for the great majority of cases. Issued under **yellow label**; price per vial, \$3.50, strictly net cash.

3. A still stronger serum of 1500 antitoxin units for exceptionally severe cases. Of this strongest grade our supply for the present will be limited. Issued under **green label**; price per vial, \$5.25, strictly net cash.

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1. A Course in Civil and Sanitary Engineering.
2. A Course in Theoretical and Applied Chemistry.
3. A Course in Agriculture.
4. A Course in Mechanic Arts.
5. A Course in Electrical Engineering.

Candidates may be admitted without examination if they bring certificates from reputable Preparatory Schools whose courses of study fully meet the requirements for admission, but students so admitted are on probation during the first year.

A Course preparatory to the study of Medicine, embracing from two to three years, is offered, the particulars of which will be furnished on application.

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The Vermont

Medical

Monthly



July, 1895:

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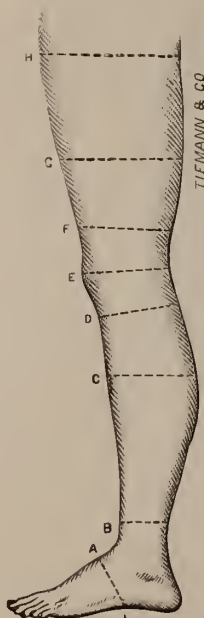
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The Vermont Medical Monthly,

*A Journal of Review, Reform and Progress in the
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VOL. I.

JULY, 1895.

NO. 7.

(Original Papers)

THE PLASTER OF PARIS, WOOD, ALUMINUM, AND OTHER SPINAL SUPPORTS.*

BY A. M. PHELPS, M. D., NEW YORK CITY.

I AM exceedingly obliged to Dr. Sayre for the courtesy which he has extended by asking me to discuss the paper of the evening. On nearly all of the points which have been raised in this paper I fully agree with him. And that the plaster-of-Paris corset is one of the best supports for Pott's disease of the spine ever devised my experience verifies. Without it it would be difficult for me to conduct the clinics and dispensaries of which I now have charge. While it has many defects and demerits, its good qualities will more than overbalance the bad, and because of this, and because its application is based upon accurate scientific principles, I give it a most hearty indorsement.

I have used the plaster-of-Paris corset from its very first inception. I have watched its growth from the time of its first application ; I have seen it fail through bad materials and worse application ; I have seen it bitterly fought against by its opponents, receiving just and unjust criticisms. I have watched its methods of application gradually reconstructed, the materials from which it is made improved, and I am free to say, after fourteen years of experience, that it is one of the best sup-

*Prepared to be read before the New York Academy of Medicine, January 31, 1895, in the discussion of Dr. Sayre's paper published in the *Journal* for March 16th and 23d.

ports to be used in Pott's disease of the spine the world has ever seen. The arguments which have been urged against its use are most fallacious. That it does *not* support is argued by some of its bitter adversaries. But when in Pott's disease of the spine a patient is suspended and a jacket properly adjusted, he is at once relieved from a condition of pain and suffering, and to that extent that any amount of pressure upon the shoulders does not produce pain. I am convinced that something does support. If it is not the jacket, what is it? A patient with lateral curvature of the spine is suspended; a plaster corset with lacings is made to fit him in this suspended and straightened position. After the corset has been adjusted the patient is three inches taller than before its application. If the corset does not support, what makes him three inches taller? I have personally observed this change in many cases, and no amount of argument advanced by the opponents of the plaster-of-Paris corset can possibly disprove a clinical fact. One fact is worth more than a thousand theories. The first book written on steam navigation by an Englishman, in which he attempted to prove that a steamship could not cross the Atlantic Ocean, was a failure, because, after his book was printed, it was brought to this country by the first steamship. And so it is with this argument. The patient *is* three inches taller with the corset than he is without it. What makes him three inches taller? Support. It is true that this corset becomes filthy; vermin invade it; but it is inexpensive, and can be changed, if necessary, once a month. Much better this than the application of a steel brace that a mother or nurse can remove at liberty, handling the child in such a manner as to produce trauma and injury to the diseased vertebra. The steel braces must be frequently removed or else excoriations will occur. They excoriate and are uncomfortable if they give support, which is one of the strongest arguments against their use in Pott's disease of the spine.

We are all agreed, I believe, that the best orthopædic machine ever devised is the human hand; guided by intelligence, it applies forces for the correction of deformity more delicately and perfectly than any inanimate object ever invented. Plaster of Paris is applied to the deformity. While in the plastic state the hands mold it to the corrected position, and hold it there until it is hard or set. Can you not see that now the plaster of Paris continues to do the work exactly as the human hand did it? In other words, plaster of Paris is effective as a brace or support only in proportion to the amount of gray cerebral matter con-

cerned in its use. In the absence of the latter it is worthless. Proper materials must be used, else the plaster will not set rapidly. H. B. Claflin & Company make me a perfect hospital crinoline, No. 100, containing just the proper amount of sizing and no indigo. The White Dental Manufacturing Company, of New York, puts up the plaster in tin cans hot from the oven. These two materials make, when put together properly, a perfect bandage that will set in five minutes. This rapid setting of the plaster is necessary, because the hand holds it to the correct position of the deformity. This material, with the stockinet sold by Ford, completes the materials necessary to make a perfect corset. The crinoline costs six cents a yard, the plaster of Paris three cents a pound, and the stockinet thirty cents a yard. A corset for a child six years old should weigh not to exceed one pound and a quarter, and for an adult two pounds and three quarters. This makes a support as light or lighter than the steel brace, and it supports as the steel brace can not.



Fig. 1.

What the profession wants is a proper brace—one that will apply extension and relieve pressure, and also act as an antero-posterior support, transmitting the weight of the body through the transverse and articular processes, thereby relieving the bodies of the diseased vertebræ. Such a support is to be found in the plaster-of-Paris corset; it removes from the nurse or the mother the possibility of interfering with the dressing. By its particularly broad, even surfaces, if properly applied, it does not excoriate, and can be worn for one or two years with comfort. Springing or bending the corset antero posteriorly makes it an antero-posterior support. Thus we see that it combines the good qualities of all the steel braces that have ever been devised, and one more, and that is *extension for the relief of*

pressure. The corset is heavy when improperly made. It is not so porous as we are led to believe. Its thickness makes it objectionable to women. This has led me to substitute for it the wooden corset (Fig. 1); the paper corset, made from paper such as is used in making paper boats; and the aluminum corset (Fig. 2). These corsets combine all the good elements of the plaster-of-Paris corsets, and, in addition to these, lightness, durability, and thinness, which do not interfere with the clothing of women.

In clinical work and among the poor patients the plaster-of-Paris corset fills the gap that nothing else can possibly fill. These patients, supported by steel braces, I am informed, and I have observed, almost invariably go on from bad to worse as regards deformity; they certainly do in disease above the eighth dorsal vertebra. I feel satisfied that in this class of patients the steel braces will be utterly abandoned in the very near future; they certainly should be in lateral curvature of the spine in any case. Now, in private practice, I know of no better dressing for Pott's disease than a light and thin plaster corset during the acute stage, after that the corsets that I have already mentioned, the use of which will be found to be more comfortable and agreeable to the patients. The difficulty with leather corsets is that they fail to support, because they do not retain their shape; as



Fig. 2.

a boot changes on one's foot, so will a leather corset change upon the body. The spinal support for Pott's disease of the spine must be unyielding and firm. The paper corset first made by Vance is, in some respects, a good corset; but it is not desirable; it is difficult to make, and it is somewhat expensive. Since the time of Vance other paper corsets have been made according to different formulæ; but they are made of paper and are really only modifications of Vance's idea. The corset made by Weigel, of Rochester, N. Y., from the paper pulp used by printers in making their matrices, he alleges, is durable and comfortable. The corsets made for me by Horace Waters & Co., of Troy, N. Y., after the paper-boat formula, have proved most satisfactory; but

it is more bother to get them than I care to endure. Other corsets made in this city, similar to that made by Vance, are open to the same criticisms as those mentioned. The jury mast and corset, when adjusted so as not to lift the head, but to draw it backward so as to transmit the weight of the head through the transverse and articular processes, makes the most efficient dressing that I know anything of, and particularly in upper dorsal and cervical disease. So far as I have observed, the deformity does not increase, as is the case with a steel apparatus in diseases of the upper dorsal region.

Professor Sayre has accomplished much by his constant and indefatigable hammering at the profession toward introducing the idea of partial suspension and fixation in Pott's disease of the spine; but the idea of partial suspension and fixation in Pott's disease of the spine carries us back almost to the traditions of medicine. Ambroise Paré, in 1579, used a fixation apparatus made from steel which is almost identical with the aluminum corset which I am using.

In 1696 von Nuck made a suspension apparatus which has been in almost constant use in Europe since that time. It is very similar to that used to-day bearing the name of the distinguished author of the paper of the evening. In 1700 Heister devised an antero-posterior support which in principle is the same as Taylor's brace used to-day. It has been in use in England since that date. In 1754 Hauer mann made a modification of von Nuck's suspension apparatus, which seems, however, to be more a change of material than principle. In 1764 Levacher devised the jury mast, which was attached to a corset made of steel and canvas, and was used precisely as the jury mast is used to-day. Portal, in 1772, slightly modified the jury mast, but attached it to a corset in the same manner. In 1825 De La Croix still further modified it by adding the chin piece. Heine, in 1832, still further modified Levacher's jury mast by adding a chin piece and attaching it to a steel hip-band corset. These jury-mast suspensions, taken together with the description of their use, are identical with those in use at the present time. About the only thing that this generation can claim in regard to spinal supporting is in the change of materials, using the principles laid down in the last century and the beginning of the present. They have been in constant use since then, and also the principles, as exemplified here to-night. I believe them to be correct. The profession owes a debt of gratitude to the author of the paper for having forced upon the Ameri-

can profession the idea of partial suspension and fixation in the treatment of Pott's disease of the spine.

I offer the aluminum corset not as a substitute for many of the braces and corsets now worn in the acute forms of Pott's disease and lateral curvature; I suggest it, rather, to take the place of such braces in cases requiring permanent bracing, or in individuals who are desirous of securing a support at any time which combines durability with lightness and comfort. So soon as a case of lateral curvature has been arrested, or the greatest amount of benefit has been derived from treatment, the aluminum corset will then be found a most agreeable permanent support. The aluminum corset has these qualities to recommend it to the patient:

1. Lightness.
2. Durability.
3. It is thin, and does not interfere with the form and clothing.
4. Being extensively perforated makes it the coolest and most agreeable of supports.
5. The patient can wear it during bathing.

An ordinary corset weighs from one to two pounds, depending upon the size. To prevent cracking and to protect it from perspiration, it is covered with a water-proof enamel which is applied by heat.

The steps of its construction: Make a plaster form of the body, send this form to the foundry and have a cast-iron anvil made; polish this, and then at a certain temperature the workmen will bend on to it two slabs of aluminum representing the two lateral halves. The frequent heating and hammering, together with the cylindrical shape, make the corset almost as strong as steel. The two halves are hinged in the back and closed with automatic clasps in front, which stop at any notch to accommodate itself to the body before and after eating. This corset completes my armamentarium in cases requiring spinal supports—viz.:

1. Plaster-of-Paris corsets for acute Pott's disease.
2. The wood corset for lateral curvature and cured or convalescent cases of Pott's disease.
3. The Beely corset for mild forms of lateral curvature, particularly in girls.
4. The aluminum corset for permanent bracing.

5. The celluloid corset which, in a way, takes the place of the aluminum.

I visited Dr. Waltuck, of Odessa, Russia, in 1888, and from him personally I learned the details of making the wood corset (Fig. 1) after several days of hard work. I found that Professor Lorenze, of Vienna, had been using the corset for some time, and was much pleased with it. At that time, however, many of their corsets proved to be inefficient on account of errors in their construction. We have used the corset constantly since that time, and, with the modifications which we have made, it is one of the most efficient, comfortable, and suitable braces that I know of.

It has been with the greatest difficulty that we have succeeded in getting the proper materials for constructing the corset, and even now it is cheaper and better to import the wood from Vienna. The spruce timber which grows there makes a better shaving than any timber that we have attempted to use which grows in America. It is tougher and works better with the glue.

An impression is made of the body with plaster bandages. This mold is filled with plaster of Paris, which makes a perfect cast of the body. The corset is now made over this cast. The cast is changed somewhat in shape to make the form even straighter than the body in the suspended position.

Corsets made according to the method followed at the time I observed the process were not so perfect as they should be. The slightest excess of glue, moistened by the perspiration of the body coming in contact with the shirt or the skin, was exceedingly disagreeable. The perforations in this corset weakened it and allowed the glue to exude during perspiration.

To obviate all this I had the corset perforated, as seen in Fig. 1, in which perforations eyelets were punched. A special machine facilitates the perforating and the punching of the eyelets. The lacings are stitched on as in Fig. 1. Trim the top and bottom with kid. The entire corset is covered inside and outside with two or three coats of shellac, which render it impervious to moisture, the eyelet holes ventilating it perfectly. The improvements which I have made in the corset consist in coating it with shellac on the inside and outside and putting eyelets in the eyelet holes, which add to the strength of the corset and ventilate it perfectly.

An ordinary corset for an adult weighs from a pound to a pound and a half. They are very durable, very comfortable to wear, and thus far I believe they are the best spinal braces yet devised.

I will add, by way of parenthesis, that the corsets, when completed, can be covered with silk or with stockinet, or they can be left in the linen finish.

*CIRCUMCISION.

By S. D. VAN METER, M. D., Visiting Surgeon St. Anthony's Hospital, Denver, Colorado.

As this simple operation is one of, if not the oldest on record, we would naturally suppose all questions relative thereto had been settled long ago, and the profession was a unit as to its merits, method of execution, etc. But it is not so, or else it would be presumption on my part to consume any of this society's time with a paper on so simple a surgical procedure.

A number of the medical profession take the stand, that it is only a few cases that require circumcision, and if it can be avoided it is better, as the Creator placed the prepuce over the glans to protect the sensitive nerve endings, and its ablation is interfering with nature. At first sight, this argument against circumcision appears difficult of rebuttal, it being impossible to say why man should be born with a foreskin if it is unnecessary. But of those who are satisfied with this argument, I would ask if they hold the same opinion in regard to that troublesome appendix vermiformis? The fact remains that the removal of the prepuce is never followed by any evil results, and in many cases circumcision is essential to the restoration and preservation of health. It must be admitted that there are a number of children and adults who do not require circumcision, but it would have done them no injury had they had the operation performed in early infancy. Personally I am firmly convinced that all male children would be better off if circumcised soon after birth. If the operation were fraught with danger locally or constitutionally, would not the Jewish race, with their proverbial shrewd-

*Read before the Colorado State Medical Society.

ness, have discovered it centuries ago? Most assuredly yes : and why any one should maintain that the operation can do harm is hard to understand.

On the other hand it is difficult to estimate the good done by circumcision. I have no more patience with those who advocate it for every reflex neurosis, from epilepsy down, than with the "official" surgeons, who look to divulsion of the sphincter and as a panacea for all the ills that human flesh is heir to. However, in any case of reflex neurosis, where you have an adherent prepuce or phimosis, it is not only right to perform circumcision, with the expectation of its doing good, but wrong to withhold the operation. But do not operate with idea that the phimosis is the cause of the neurosis. In most cases you will only be removing a point of irritation to an already bankrupt nervous system, and must only expect an amount of benefit proportionate to the irritation removed. That an adherent prepuce can be a great source of irritation to the general nervous system, cannot be gainsaid. I have seen too many cases of night terrors in children, completely cured by circumcision, when all other treatment had failed, the operation having removed the cause, the adherent prepuce.

In such cases the foreskin does not act as a shield to the sensitive nerve endings, but by retaining smegma and decomposed urine, it keeps the whole glans in a state of constant irritation. Such a state causes hypersensitiveness and increases the chances of the child becoming a masturbator.

Without going into the history of circumcision, it is safe to say the unprejudiced reader of the Scriptures will naturally come to the conclusion that the most probable origin of the operation, was the discovery of its value from the standpoint of cleanliness and hygiene, by the Hebrews ; and to make it universal among that people, it was embodied in the Mosaic law as a religious rite. Too much cannot be said in its favor in regard to cleanliness, and it is impossible to estimate the good done when we take into consideration its effect upon the prevention and decrease of venereal disease. Here the effects are too far reaching to ascertain, and we can only surmise. That a circumcised man is less liable to contract venereal diseases than one who is not, cannot be questioned, and anyone who has treated many venereal patients, must admit that these cases are greatly simplified, if they have been circumcised.

In this day, when the brilliant and triumphant successes in visceral surgery have attracted so much attention, the technique of minor surgery is apt to be neglected, and many surgeons have apparently forgotten or disregarded the fact, that for continued success, certain points of technique must be observed, even in the simplest of operations. This is true as regards circumcision. I have seen good surgeons fail altogether, simply because they paid no attention to one or two points necessary for success. Time after time I have heard the question asked: "Why do you have recurrence of phimosis so frequently after circumcision?" If the operation is properly performed recurrence is impossible. Hence it must follow, many circumcisions are improperly done. Strange to say but few text books give a clear and full description of the operation. The most complete and lucid is that in Wyeth's surgery. Having performed the operation many times with universal success, after a method similar to this author, permit me to describe the operation.

Presupposing the patient anaesthetised and prepared for operation, the parts are disinfected as well as can be with bichlorid solution 1-2000. Hands and instruments of operator and assistant, if there be one, are likewise rendered surgically clean. Allow the prepuce to assume a natural position. With a camel's hair brush, dampened with methylene blue, draw a line around the penis, corresponding to the corona. Draw the prepuce well forward and cut it off with sharp scissors, in the line marked with brush. Although it may appear you are cutting the integument at right angles with the penis, when it is released it will be found that the integument has been cut upwards, and backwards, giving a large opening for the glans to pass through. The loose connective tissue between the skin and body of the penis now permits the former to be drawn far back from corona, leaving a large raw surface. With the mucous membrane, however, it is different, as generally it will be found it has been cut off at a point sufficient to expose about one-third of the glans. By passing a grooved director between the glans and mucous membrane, incise the latter on the dorsum with a bistoury to a point near the corona, or what I like better, slit it up with a blunt-pointed pair of scissors. Care must be taken that your instrument is not in the meatus. This permits full exposure of the glans, although it is astonishing in how many cases from one to ten years of age, it will be found that the prepuce is adherent to the

glans, and has to be gently separated, and at best leaves more or less of the surface of the glans denuded. In this procedure, the blunt-point of a grooved director and peeling motion of the thumbs and index fingers, are useful. Now comes a step in the operation which is the key note to success,—*the trimming of the mucous membrane*. There being no elasticity of this tissue, the operator can at will fix the length of the prepuce, and if it be made short enough, recurrence of phimosis is impossible. With forceps and scissors, cut it off, leaving a fringe of uniform width from the corona of one-eighth to one-quarter of an inch, according to age and size of patient. If the artery of the frenum has not been severed, there will be but little hemorrhage, but if there should be the hand of the assistant can easily control it by grasping the penis near the base. After irrigating the wound with bichlorid solution, the edges of the integument and mucous membrane are united by a continuous lace cat-gut suture, beginning at the frenum, previously fixing the skin and mucous membrane on the dorsum opposite frenum, with a hemostat to prevent getting too much tissue on either side. When the hemostat is reached with the suture, take a reverse stitch or two to prevent purse string action. This method of suture secures rapid and accurate apposition, and the cat-gut is absorbed by the time union takes place. The parts are now once more cleansed with the bichlorid solution, and dusted well with iodoform, and in adults a gauze and cotton dressing is applied, leaving free the meatus to permit voidance of urine, without disturbance of the dressing. In young children, however, the best dressing is none at all, as you cannot expect any antiseptic dressing to remain so, and the most satisfactory protection from the clothing is a large piece of oil silk lubricated with carbolized vaseline. Usually within twenty-four hours the iodoform has formed a hard crust over the line of suture and denuded portions of glans under which the healing process goes on by first intention. If not, however, an occasional bathing of the parts with warm antiseptic solutions prevents any undue suppuration or sepsis.

To prevent erections which often thwart union by first intention, full doses of potassium bromid are given.

If the advocates of divulsion, incision and other substitutes for circumcision, would try this operation, they would be convinced that it is simple, always effective, and not to be equaled by any other.

The question of anaesthesia I decide as follows : Infants none, children preferably chloroform, adults ether. My experience with cocain has been unsatisfactory, and while in cases where a general anaesthetic is contraindicated, it can be used with great advantage, my preference is for ether.

There are many other points connected with circumcision I would like to touch upon if time permitted, but before closing will say, in cases of chancroid, where this operation is indicated, after due precaution, I do not hesitate to operate, and contrary to many surgeons' experience, have always had good results.—*Denver Medical Times*.

SOME GOOD PRESCRIPTIONS IN SUMMER DIARRHŒA.

At this particular time of year when the various intestinal disorders characterized by diarrhœa are so prevalent, and so annoying to the general practitioner as well as to his patient, the following formula may prove of value. Of course ordinary measures in regard to diet and complications should be observed.

R. Ext. Opii,	gr ss.
Plumbi Acetat,	gr ii.

Taken in pill form every two hours.

Or

R. Pulo. Opii,	gr. ss.
Plumbi Acetat;	gr ii.
Pulo. Ipacac,	gr $\frac{1}{4}$.

Every two hours.

If the case is seen early, the following is good according to Hughes.

R. Magnesi Sulph,	dr i.
Acid Sulph dil,	m x.
Tinct Opii deodorat,	m x.
Aquae Chloroformic,	ad dr ii.

Every two or three hours until fæces appear in the stools, when small doses of opium and quinine may be given.

The following, recommended by Dr. Grinnell, and commonly called "Grinnell's Pill", is a most efficient formula.

R. Camphoræ,	
Ext. Opii,	
Plumbi Acetat,	aa. gr i.

Administered in pill form every three or four hours.

For children,

R. Pulo Ipecac,	gr $\frac{1}{4}$.
Bismuth subnit,	gr v.
Creta praep.	gr iii.

Every two hours.

R. Tinct. Opii et Ipecac,	m v.
Acid Sulph. Aromaticum,	m x.

Every two or three hours.

For mild lingering attacks the following taken during the day as a drink will be found of value,

R. Lactic Acid,	dr ii.
Syn Limon,	oz iv.
Aqua,	oz xxxiv.

When accompanied with vomiting use,

R. Zinci sulphocarbolate,	gr ss.
Lacto pepsin,	gr. i.
Bismuth subnit,	gr. iii.

Every one or two hours until symptoms are stopped.

U. V. M. MEDICAL COLLEGE COMMENCEMENT.

The Forty-second Annual Commencement of the Medical Department of the University of Vermont took place in the Howard Opera House, Monday evening, July 8th.

Following is the program :

PROGRAM.

March, "Infantry," Moldauer.

PRAYER.

Rev. Joel Hastings Metcalf.

Czardas, Gung'l.

CONFERRING OF DEGREES.

President Buckham.

Selection, Madeleine, Edwards.

AWARD OF PRIZES.

A. F. A. King, A. M., M. D.

VALEDICTORIAN.

Harold A. Fiske.

Waltz, "Friend Fritz," Edwards.

ADDRESS.

Rev. David N. Beach.

Picadore March, Sousa.

The honor men were, Harry Milton Gardner, Schuyler Weston Hammond, Harry Albartus Brown, Charles Bumps Hussey and James Henry Naylor, and the faculty prizes for efficiency in examination were

awarded, 1st, to Harry Milton Gardner, and 2d, to Charles Bumps Hussey.

The opera house was crowded and intense interest was manifested in the program. The address by Rev. David N. Beach of Cambridge, Mass., was a masterful effort, eloquently delivered. After the commencement exercises the annual banquet of the graduating class was held at the Van Ness House. Good cheer prevailed and a most excellent time was enjoyed by the newly made physicians and their guests.

This year's class comprised forty-five graduates, and in many ways it has been a notable one. The standing of each member of the class was exceptionally high, while the examinations were fully up to their former reputation for thoroughness. But the men have done good, conscientious work, and their success is the result. They realized that their duty to the college was to assist in maintaining the already high standing of the U. V. M. Medical Department, and they have done it well. Quite a number of the men have won excellent appointments by competitive examination, over candidates of many other schools, and this goes far towards indicating the work of the past.

The class deserves commendation and to them we express our congratulations.

The class officers were--

J. A. Drew,	President.
E. M. Crane,	Vice-President.
J. W. Estabrooke,	Secretary.
C. P. Curley,	Treasurer.
E. F. Ross,	Historian.

EXECUTIVE COMMITTEE,

J. A. Mack,	
G. W. Holden,	G. S. Heft,
C. B. Hussey,	S. D. MacAllister.

MARSHAL,

J. T. Lyston.

CHRONIC BRIGHT'S DISEASE.

By L. C. ALLEN, M. D., Hoschton, Ga.

In most of our text books we find a description of the different forms of Bright's disease that is difficult to understand; at least that was my experience when I, as a student, commenced to study the subject. A redundancy of names and descriptions is often used to such an extent as to be exceedingly confusing. We find mentioned, for instance, interstitial nephritis, tubular nephritis, small granular kidney, fatty degeneration of the kidney, renal cirrhosis, waxy, lardaceous, amyloid kidney, large kidney with waxy degeneration, large kidney without waxy degeneration, parenchymatous nephritis, simple large kidney, the red, the white and the mottled kidney, spirit kidney, gouty kidney, contracted kidney, and so on *ad infinitum*:

Such a formidable array of names, and such a prolix description as is commonly met with leads one into perplexity. Instead of getting a clear understanding of the subject, the reader is "lost and bewildered in a fruitless search."

Divesting our minds of the pathological anatomy, and as many names as we can get rid of, let us see if we cannot get a clear clinical picture of each of the different forms of this disease. Three types only are of sufficient importance to merit consideration. They are:

1. Chronic tubular nephritis.
2. Chronic interstitial nephritis.
3. Waxy kidney.

In practice these forms can usually be distinguished with little difficulty, although the different types are sometimes combined.

1. In chronic tubular nephritis the urine is scanty, high colored, containing much sediment, and usually loaded heavily with albumen. Uremic symptoms are marked—headache, impaired vision, inflamma-

tion of mucous membranes, nausea, diarrhœa, dropsy, convulsions. The kidneys are generally large and white. This form occurs in both sexes at all ages—it is everybody's disease.

The presence of albumen in the urine is not of itself adequate proof of Bright's disease. Perhaps the majority of persons who pass albumen have no kidney disease at all. Albumen is found in the urine in moderate amount, and for brief periods of time, in the course of a great many diseases; for instance, in heart disease, in specific fevers, etc. It occurs temporarily in well people, from over exercise and other causes.

The prognosis in chronic tubular nephritis varies greatly. In some cases, the disease runs a mild course; in others, the contrary is true. Many cases under proper treatment will get well.

2. Chronic interstitial nephritis occurs mostly in men, and in the majority of cases the patients are 45 to 60 years of age. Syphilis, lead poison, gout and rheumatism are often present as causative factors. Hard brain work, and protracted worry, from the cares and anxieties incident to professional and business pursuits, often bring on this disease. In this form there is no dropsy, and instead of scanty urine, as in the first form, you here find polyuria. Sometimes the urine is so abundant as to make one suspect diabetes. The urine is clear and the specific gravity is low. There is sometimes no albumen—never very much, unless acute tubular nephritis is superadded. Uremic symptoms are not marked. A characteristic symptom is enlargement of the left ventricle of the heart, causing an increased intensity of the aortic second sound of the heart. The pulse is hard and resistant, denoting high arterial pressure. This type is also called "the small red kidney," "the contracted kidney," "gouty kidney," and lots of other appellations. The prognosis is always bad.

3. The third form is called waxy, lardaceous, or amyloid, accordingly as you think the kidney resembles wax, lard, or starch. The main fact to remember regarding this form is, that it is a secondary disease. There is an abscess—pus—somewhere in the body; cavities in the lungs, caries or necrosis of bone, ulcers in the intestines or chronic suppuration in some part of the body. The liver and spleen are likewise usually waxy and more or less enlarged. The urine is abundant, pale, and of low specific gravity. Albumen is usually present, but variable in amount. Anasarca is usually present, but less marked than

in tubular nephritis. An important point is this: Owing to the co-existing disease of the liver, hydro-peritoneum may be out of proportion to the general dropsy. The prognosis is bad. Waxy kidney is, as a rule, a fatal disease.

TREATMENT.

We shall offer here only a few suggestions regarding treatment.

In chronic tubular nephritis much can be done toward effecting a cure. The patient should, if possible, be sent to a warm climate, and I know of no better place to send these patients than Thomasville, Ga. The warm atmosphere acts kindly on the skin, dilating the capillaries, relieving internal congestion and causing the skin to lessen, to a considerable extent, the work of the kidneys. In a warm climate the patient can take an abundance of exercise in the open air, and this increases the action of the skin as well as being very beneficial to the general health. The clothing should be such as to secure uniform warmth and promote activity of the cutaneous function. The diet should be liberal, but judicious. Milk, (especially butter milk,) should be used freely. Prohibit alcohol totally, and all articles of food that are difficult of digestion. The patient must avoid exposure to the vicissitudes of the weather. The tincture of the muriate of iron should be prescribed, and some mild diuretic, preferably the acetate of potassium. Digitalis is often employed with advantage. The bowels should be kept patulous by means of hydrogogue cathartics. If uremic convulsions occur, do not use ether—it kills. Morphine hypodermically, and chloroform, are good and safe remedies.

I have recently had excellent success with Norwood's tincture of *veratrum viride*, using fifteen minims hypodermically at one injection. It produces distressing nausea, but this effect can be prevented in large measure by giving a hypodermic of morphia just before administering the *veratrum*. It stops the convulsions and relieves the patient for a time of uremic symptoms. Whenever, in the course of the disease, uremic symptoms become violent, and convulsions seem to be impending, the *veratrum* may be administered in the manner above mentioned, with the full assurance of preventing the convulsions, and of giving marked relief to the symptoms. In the few cases in which I have employed it, the effect has been really wonderful. In a case now under

treatment I am using it in drop doses three times a day, and it is having a happy effect.

In chronic interstitial nephritis, the iodide of potassium should be given whether syphilis is present or not. If syphilis, lead poison, gout or rheumatism be present, each should receive appropriate treatment. Hygienic measures and tonics are not to be neglected. Although a patient afflicted with this form of Bright's disease never gets well, yet in most cases life may be prolonged to some extent, and in most cases for a very long time.

For waxy kidney there is no treatment. It is a fatal disease. Such measures as are employed should be directed to the primary affection, to the amelioration, as far as possible, of the symptoms, and to the sustaining of the vital power of the patient.—*Charlotte Medical Journal*.

The Vermont Medical Monthly,

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EDITORIAL.

THE BICYCLE "CRAZE."

Few American "fads" have reached the extent of the bicycle "craze," and with all that can be said in favor of the sport there is yet another side. Several articles by prominent physicians in regard to the effect of bicycling upon the heart's action, have recently appeared in the medical journals, and the evidence brought forward as proof of its deleterious effect upon the heart is certainly conclusive.

And reasoning from a rational standpoint, it is safe to predict that there will be a notable increase of bodily trouble in the perineal region during the next few years. This will obviously be in greater evidence in the female than in the male, owing to anatomical differences, and the tendencies of the female body.

This view of the matter can hardly be called pessimistic, for no physician would advise bicycling in the presence of any weakness of the pelvic organs, however slight, and surely anything which tends to increase a certain condition must tend to *produce* that condition.

Everyone knows the wholesale condemnation the sewing machine received, and how many female weaknesses were attributed to its use, but as yet we have not heard a word of complaint from the fair advocates of the "silent steed," which in our opinion is far more conducive to these self-same weaknesses.

But "fashion covers a multitude of sins," and we fear that the girl of the period will sacrifice even health itself for the sake of being fashionable and "in the swim."

At any rate the physician can afford to watch and wait.

AMERICAN MEDICAL PUBLISHERS.

This Association held its second annual meeting at the Eutaw House on the 6th and 7th of May, with the following in attendance :

"Dr. J. C. Culbertson, Cincinnati, Ohio ; Miss Dora Jones, St. Louis, Mo. ; Dr. John C. Le Grand, Anniston, Alabama ; Dr. C. F. Taylor, William B. Saunders, Philadelphia, Pa. ; Miss Hackedorn, Toledo, Ohio ; Dr. F. E. Stewart, Detroit, Mich. ; J. MacDonald, Jr., Irving J. Benjamin, Dr. Ferdinand King, Dr. H. P. Fairchild, New York City ; Dr. R. W. Lowe, Bridgeport, Conn. ; Dr. W. C. Wile, Danbury, Conn. ; Dr. H. M. Simmons, Dr. William B. Canfield, Baltimore, Md. ; H. A. Mathie, Dr. A. H. Ohman-Dumesnil, Dr. I. N. Love, St. Louis, Mo. ; Dr. Landon B. Edwards, Richmond, Va. ; Dr. Hudson, Austin, Texas ; Dr. William F. Bartlett, Philadelphia ; Dr. T. D. Crothers, Hartford, Conn. ; Dr. Gilbert I. Cullen, Cincinnati, Ohio ; Dr. Henry S. Upson, Cleveland, Ohio ; Dr. E. E. Holt, Portland, Maine ; J. M. Grosvenor, Jr., Boston ; Charles Wood Fassett, St. Joseph, Mo."

Nineteen new members were admitted and questions of the day affecting medical publishers were profitably discussed.

Beginning with July 1st, a monthly bulletin will be issued for the benefit of members of the Association. It is to be edited by Drs. P. H. Fairchild, J. MacDonald, Jr., and Ferdinand King, New York City ; Dr. J. C. Le Grand of Anniston, Alabama, and Charles Wood Fassett of St. Joseph, Mo.

The secretary was authorized to issue in pocket form, a revised list of medical advertisers.

Upon invitation, the Association banqueted with the Medical Editors, on Monday evening.

The officers re-elected were as follows : President, Dr. Landon B. Edwards, of Richmond, Va. : Vice-President, Dr. H. C. Culbertson, Cincinnati, Ohio ; Treasurer, J. MacDonald, Jr., New York City ; Secretary, Charles Wood Fassett, St. Joseph, Mo. Dr. J. C. LeGrand and Irving J. Benjamin were elected on the executive board.

MEDICAL ABSTRACTS.

SEBACEOUS TUMORS.—Dr. Robertson, in the *Brit. Med. Jour.*, gives a very simple and effective method of treating sebaceous cysts. He punctures the cyst with a cataract knife, and gently squeezes out the contents; after the cyst is thoroughly evacuated he introduces a very small piece of nitrate of silver. The next day, with the aid of a small pair of forceps, he withdraws the capsules of the cyst, which readily comes away. Every case treated was permanently cured.

ANGINA PECTORIS.—Burney Yeo, *Practitioner*, thus summarizes the therapeutic indications :

1. Maintain nutrition, avoid strain.
2. Relieve dyspepsia, flatulence and constipation.
3. Forbid cardiac toxins, as tea, coffee, tobacco, alcohol and all substances developing toxins in the bowels.
4. Remove gouty and other dyscrasias.
5. Increase cardiac tone and lessen tendencies to degeneration.
6. Relieve paroxysms by sedatives and (or ?) stimulants.

For the fifth indication, iron, digitalis, arsenic or strychnine may be given in appropriate cases. Gout and vascular degeneration require iodides; malaria calls for quinine; while cocaine has been recommended to prevent the attacks.

For the paroxysms, the nitrite group is useful, even when no vaso-motor spasm can be demonstrated. Diffusible stimulants, the ethers, ammonia or brandy should also be given at the onset. Cold feet should be put in hot water. Balfour, if the nitrates fail, resorts to chloroform inhalations, pouring the drug upon a sponge in a smelling-bottle. In severe and protracted cases, morphine hypodermics in moderate doses. Ethyl bromide has been inhaled. Flying blisters are of value for chronic aortitis, involving the cardiac plexus. Galvanism to the vagus and to the inter-costal-humeral, if there is an aura in the hand, is useful in preventing attacks. Leeches to the sternum and repeated small venesections have also been found useful.

CICATRICES.—Small, comparatively insignificant cicatrices of the face, such as result from variola, pustular acne, etc., are sometimes made less conspicuous from the long-continued ingestion of small doses of some refined oil, as castor or cotton-seed oil. These should be given in from three to twelve drop doses three times a day.—*Charlotte Med. Jour.*

ADMINISTRATION OF ALCOHOL AS A MEDICINE.—Prof. Liebreich (*Therap. Monatsh.*, 1895, IX, p. 273).

In cases in which one wishes to administer alcohol in a more exact dosage than can be accomplished by the use of the alcoholic beverages of the market, one may employ alcohol of U. S. P. strength, mixed with various diluents, to advantage, varying the quantity of alcohol according to the necessity of each case. The diluents and correctives may be varied to suit individual tastes.

The author has found the following to answer in most cases.

Alcohol,.....	120 parts.
Tinct. Orange Peel.....	6 parts.
Tincture Ginger.....	1 part.
Distilled Water.....	To make 200 parts.

THE TREATMENT OF TUBERCULOSIS BY CREOSOTE AND PEPPERMINT.—At a recent meeting of the American Medical Association, De Lancey Rochester presented a report of 34 cases of pulmonary tuberculosis treated by peppermint inhalations with creosote internally, according to the plan recommended by Carasso. The Italian practitioner reported 44 cases with 38 recoveries and 6 deaths. The average duration of treatment was 60 days, and the recovery in all the recorded cases was said to be permanent. Rochester gave the method a trial, as he had had the best results in cases in which the inhalation of menthol in petroleum oil had been combined with the internal administration of increasing doses of creosote. He treated 34 cases by Carasso's method in Erie County Hospital, and came to the conclusion that while the internal treatment is unphysiological and very likely to cause digestive disturbance, the inhalation of peppermint is valuable and deserves further trial. Amos, of Baltimore, confirmed Rochester's statements by a report of between 85 and 90 cases which had been under treatment about a year. In only two was there marked improvement, and in one of these this was doubtless due to the altitude and rarefied air of a mountain home. Amos, however, particularly recommended the inhalation of peppermint, saying that patients even at the point of death were benefited by it. Rochester, in further discussion, strongly advocated the administration of increasing doses of creosote, commencing with 1 minim and increasing it until a dose of 15 minims was reached. His cases had steadily improved by careful attention to their general condition, but without any other medicine than creosote. Irritation of the stomach might be in great measure prevented by giving the creosote not in water but in claret or in mucilage of acacia.—*Charlotte Med. Journal*.

DIGITALIS IN GOITRE.—The most efficacious medical treatment of goitre consists in the internal administration of digitalis and the local application of an iodide ointment (*Med. Week.*). The goitre diminishes in size, and even disappears, with astonishing rapidity. The favorable action of digitalis in hypertrophy of the thyroid is explainable by its influence on arterial tension; but this

employment of the drug is not new, as it originated with Doctor Murray in 1776.
—*Ex.*

INSOMNIA IN SURGERY, AND ITS TREATMENT.—Van Schaick (N.Y. Med. Jour., March 2, 1895, p. 268). The author concludes :

1. That insomnia, from whatever cause, is an important complication of surgical disorders.

2. Its relief is necessary to the comfort of the patients, improves the prognosis, and materially assists recovery after operations.

3. Where pain is the chief factor, morphine is the only drug that will relieve with certainty.

4. There are many surgical disorders in which insomnia may be relieved by trional; and, finally—

5. Trional is an excellent drug for the purpose, as it acts rapidly and safely, has no inhibitory action upon the secretions, seems to possess a stimulating effect, is well borne by the stomach, is easily absorbed by the rectum, and fails to produce unpleasant after-effects.

THE TREATMENT OF BURNS.—Bull. med., 1894, VIII, p. 1116).—The following treatment is recommended for burns: After carefully cleansing the injured parts, make an emulsion of olive oil and the white of egg. Paint the wound with a soft brush. The pain disappears during the treatment; should it return, the application is repeated. The emulsion forms a crust over the wound, which protects it and allows cicatrization to take place.

NEWS, NOTES AND FORMULA.

THE DANGER OF ANESTHETIZING DIABETICS.

The danger of narcotizing diabetics is not generally known as it should be. As many as twelve fatal cases have been recently recorded. Even in slight cases of diabetes, patients are apt to become comatose and die. Not immediately, but several hours after the chloroform narcosis has passed off. They become indifferent, stupid and confused. Finally lose consciousness, pass into coma and die. —*Charlotte Med. Jour.*

TO RESTORE CARDIAC ACTION SUSPENDED DURING CHLOROFORM ANESTHESIA.

In apparent death from chloroform let the respiration take care of itself while you make quick, firm pressure with the hands immediately over the heart, repeating at the rate of 120 times per minute. This forces the heart to contract, in many cases gradually restoring its function.

PERTUSSIS.

R. Syrup Picis Liq, 2 ounces.

Glycerini, 1 ounce.

Bromidia, 1 ounce.

M. Sig. Teaspoonful every three hours.

SALIVA A REMEDY FOR ACID DYSPEPSIA.

In cases of acid dyspepsia have your patients chew chewing gum or any other harmless substance during the entire period of digestion, swallowing the saliva. During the intervening period the salivary glands should have rest, hence chewing should be suspended.

The following is a good astringent pill in intestinal tuberculosis :

R. Cupri Sulphatis, $\frac{1}{4}$ gr.

Pulveris Opii, $\frac{1}{2}$ gr.

Extracti Gentiantae, ij gr.

Misce et Fiat Pilula.

One or two pills for a dose ; repeated if necessary.

THE MAMMARY SECRETION.

Administering to the mother the volatile oils, such as anise, nutmeg, etc., by imparting a pleasant flavor to the breast milk, will sometimes cause the child to suck more eagerly and vigorously, and thus by reflex irritation of the nipples serve to increase the flow of milk which is becoming scanty.—*Louisville Med. Monthly*.

MIGRAINE.—By Dr. Frendenberg.

R. Hydrochlorate of morphine, gr. 1-6.

Salicylate of sodium, gr. iv.

Phenacetin, gr. iv. M.

One or two such cachets, according to need.

PHYSIOLOGY.

Professor Ingram says: "The causes of the circulation of the blood in order of their importance are: First, the inequality of pressure in the blood vessels, which is the greatest at the ventricles, least at the auricles, and is regulated by the heart; second, the affinity of the tissues for the blood as it passes through the capillaries; third, vascular contractility; fourth, muscular contraction; fifth, respiration."—*American Medical Journal*.

Philadelphia is a medical center of the United States in point of its number of students. There are in all 2,400 students; 875 of these are in the University of Pennsylvania, 700 in Jefferson, 325 in Hahnemann, 300 are medico-chirurgical, and 200 are women.

A large share of the class just graduated from the U. V. M. Medical Department intend to take a post-graduate course in New York at the Post-Graduate Medical School and Hospital. A few months graduate study in this school is a finishing touch to an already excellent understanding of medicine.

In an article read before the American Academy of Medicine at Baltimore, May 6, 1895, by Percy H. Millard, M. D., of St. Paul, the author concludes that efficient medical legislation will bring about the following results:

"1. It will protect the people by affording a profession of greater intelligence.

2. It will suppress charlatanry.

3. It will reduce the number of persons practising medicine to a number commensurate with the demands of the people.

4. It will reduce the number of medical colleges, at present far above legitimate demands.

5. It will raise the general standard of professional fitness, assuring us a professional prestige in the future, becoming the most important of the learned professions."

PUBLISHER'S DEPARTMENT.

BROMIDIA.

The steadily increasing use of Bromidia by the profession in all parts of the world demonstrates its great value as a hypnotic. If human testimony is worth anything at all, then Bromidia must unquestionably be the best and safest of all sleep producers. Dr. Federico Tommasi, of Maggranico, Italy, on July 24, 1893, writes: "Although as a rule I do not approve of specialties, still when I find an ideal one, both as regards therapeutic combination and pharmaceutical preparation, easily administered, prompt and certain in action, *I value it*. Bromidia fulfills all these conditions. I have obtained especially gratifying results by its use in two cases—one, heart disease, the other, acute lumbago. In both cases it promptly relieved the pain, produced tranquil sleep, with no disagreeable after effects."—*Memphis Medical Monthly*, June, 1895.

PEROXIDE OF HYDROGEN IN CONJUNCTIVITIS.

Lautenbach, *Therapeutic Gazette*, advocates the use of Peroxide of Hydrogen in conjunctivitis. He has been quite successful in the treatment of this troublesome disease by the following method: From 10 to 30 drops of the solution, full strength, is instilled at the outer canthus of the eye, and with the fingers a degree of massage is applied over the entire surface of both eyelids. A second, third or fourth application can be made if necessary. In trachomatous cases the eyelids should be everted and rubbed with the rubber end of the eye-dropper. A saturated solution of boric acid is then used to irrigate conjunctival cul-de-sac. The inflamed surfaces are thus cleansed and ready for whatever application is necessary. The treatment is not intrusted to the patient, but is performed by the surgeon himself, once or twice a day, or a few times a week, according to indications. Dr. Lautenbach says it is important to have peroxide test beyond ten volumes, that it should not lose its oxygen on slight change of temperature,

and, most important of all, that it should not contain any free acid. Undue amount of free acid causes pain and untoward effects. On account of the uncertainty of preparations fit for use, Marchand's should always be procured. The lids should be everted and thorough exposure of conjunctiva had ; it is then cleansed by warm solution of boric acid.—*Med. Fortnightly.*

LACTATED FOOD.

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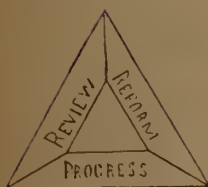
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No. 8.

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August, 1895.

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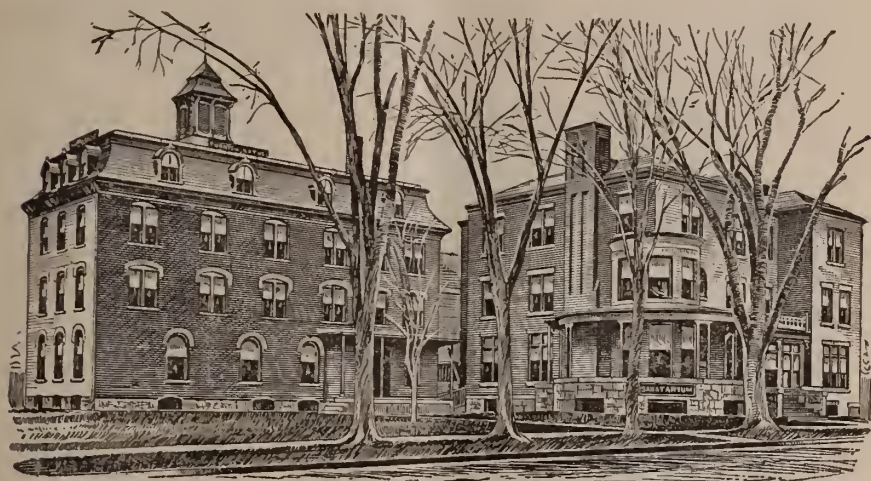
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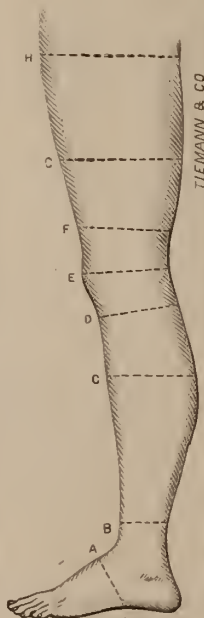
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VOL. I.

AUGUST, 1895.

NO. 8.

(Original Papers)

THE RADICAL CURE OF HYDROCELE.

*Read in the Section on Surgery and Anatomy, at the Forty-sixth Annual
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By D. C. HAWLEY, A. B., M. D., Burlington, Vt.

Attending Surgeon Mary Fletcher Hospital; Attending Surgeon
Fannie Allen Hospital; Secretary Vermont State
Medical Society.

The only known method of effecting a certain, absolute and permanent cure of a hydrocele, is to bring about the complete obliteration of the cavity of the tunica vaginalis.¹

The methods usually employed by surgeons at the present time for the radical cure of hydrocele, are the injection method and the method by open incision. The treatment by injection fails in some cases, from the fact, no doubt, of its being improperly or poorly done. Again, it often fails in cases of very large hydrocele, and invariably in cases in which there is much thickening of the tunic, thereby preventing perfect collapse of the same.

¹ Treves.

Treatment by iodine injection is usually painful, and is attended with intense swelling and tenderness of the scrotum. Three to five days must be spent in bed, and three or four weeks are often necessary for perfect recovery.

Injection of carbolic acid is, in my experience, less painful and more efficacious, but requires about the same length of time for a cure.

In the operation by incision, as usually practiced and as described in the text-books, an incision about two inches long is made along the anterior surface of the tumor, which thoroughly opens and drains the sac. The edges of the tunica vaginalis are stitched to the skin by catgut or silk sutures, and a rubber drainage tube is inserted, or the cavity is packed with gauze.

The after treatment consists in a daily dressing, when the tube is gradually shortened or the packing is renewed. The patient must remain in bed for ten or twelve days, and eighteen to twenty-eight days or more are required for a cure in most cases of operation by incision.

I wish now to describe, briefly, a method which I have employed for two or three years past, in my service in the Mary Fletcher Hospital and in private practice. I consider it almost unnecessary to say, at the present day, that the operation must be done aseptically.

The usual incision, two to three inches in length, is made along the anterior surface of the tumor, taking care always not to injure the testicle. The fluid is allowed to escape and the sac is irrigated. The margin of the tunic is stitched to the skin by six or eight black silk sutures. I use black silk, as it can be more readily found and removed. The interior of the sac is now irritated over every part of its surface by being rubbed with the finger tips. This is not done roughly, but gently and thoroughly. The sac is packed with strips of iodoform gauze, the usual dressings applied and the patient kept in bed. At the end of twenty-four hours the strips of gauze are removed and the cavity is irrigated. The entire surface of the tunica vaginalis will now be found to be covered with inflammatory lymph. Further packing or drainage is not used.

The opposing surfaces of the sac are brought into thorough coaptation by compression, applied by means of strips of adhesive plaster. A light dressing of gauze is placed over the wound of incision and the adhesive strips are applied systematically around the scrotum over this dressing, so as to produce firm and even compression. The dressing

should be inspected occasionally at first to see that it does not become loosened. If it does so, it must be reapplied at once. At the end of four or five days the dressing is taken off and the silk sutures removed.

At this time the cavity of the sac will be found to have been obliterated, the opposing surfaces having united by adhesive inflammation. Should a sinus be found, which, however, has happened but once in any of my cases, it should be treated on general principles and allowed to heal from the bottom. The wound is again dressed and mild compression continued. Two or three more dressings are all that are required, and at the end of six to twelve days the wound will be entirely healed. A slight dressing may be necessary for a few days to prevent chafing, and a suspensory should be worn for several weeks.

The strips of gauze used for packing should be counted and a note made of the number, to avoid the possibility of one of them being left at the time of the first dressing. But little swelling follows the operation, and I have seen no cases in which orchitis has supervened. The patient need be kept in bed but three or four days, but the scrotum should be suspended whenever he is allowed to get up.

Case—George W., aged 54, carpenter by trade, was admitted to the Mary Fletcher Hospital with a history of double hydrocele having existed for ten or twelve years. Both had been tapped several times. On Oct. 16, 1894, I operated on him under ether, in the manner described. The left hydrocele contained a pint of fluid and the right more than a pint. The case was dressed the next day, when the packing was removed and the surfaces of the sacs were brought together and held in apposition by a well-fitting dressing. This was left five days and on October 22, six days from the time of operation, the case was again dressed and both sides were found entirely healed, excepting the incisions through the scrotal tissues. There was no pus. Dressed again on Oct. 24, or the eighth day, and the patient allowed to go home as he resided in the city, with instructions to return in four days. He returned as directed on Oct. 28, when both incisions were found entirely healed, and he was discharged cured—twelve days from the date of operation. He went to work at once at his trade, having lost less than two weeks' time. At the present writing he is perfectly well, with no sign of a return of the trouble.

Another case of single hydrocele containing a half pint of fluid was operated on by the same method nearly two years ago, and was

well in six days, and no sign of a return of the hydrocele up to the present time. In one case, a small sinus was found at the second dressing, which was one inch in depth and a little larger than a good-sized probe. This closed perfectly in three or four days.

Every case operated on thus far, by this method, has been successful.

The advantages claimed for this operation over any other, in all cases of old or large hydrocele, are the shorter duration of the treatment, together with the probability of a radical cure in every case.

The treatment by the injection method requires a long time for the restoration of the parts to their normal condition, while at the same time the result is uncertain, for the reason that the inflammatory process set up by the injection may not be sufficient to produce a cure. On the other hand, it may be so severe as to cause extreme swelling and much suffering. The operation by injection is an unscientific and haphazard method, while this operation is a scientific procedure based on modern aseptic principles.

The special objection to the open incision method is the long duration of the treatment. The patient must remain in bed from six to twelve days, which time measures the duration of the treatment by the method I have described.

This method is, I believe, applicable to all cases requiring an operation. It is not open to the objection that the patient must take an anesthetic, for if there is any special reason why he may not do so, or if he will not submit to it, the operation may be done with cocain.

A NEW SURGICAL OPERATION.

Recently an operation was done at Professor Kelsey's Clinic at the Post-Graduate Hospital, which, as far as we know, was original.

The case was one of those rare ones of chronic intussusception of the sigmoid flexure into the rectum, which are often suspected but seldom diagnosticated with certainty. The patient, a comparatively young man, complained of constant straining and tenesmus. He spent hours daily in trying to have a passage, never had any relief, and after being treated for months for "chronic proctitis," was finally referred to the clinic of Dr. Kelsey at the Post-Graduate Hospital.

An examination before the class without ether simply brought out the fact that there was no protrusion of the bowel on defecation, no hæmorrhoids, no proctitis, but a distinct intussusception of the upper part of the rectum into the lower. The sulcus between the intussusceptum and the intussusciens was well marked, soft, movable, and not to be mistaken for an organic stricture.

An operation was proposed and submitted to. Under ether the invagination was drawn down three inches outside of the anus, and although it then appeared very much like an ordinary case of prolapsus, the point of invagination could still be distinctly felt two inches within the sphincters.

A combined operation was done.

First, Van Buren's old operation for prolapsus was performed for the purpose of lightening the anus, causing artificial stenosis, and preventing any further protrusion.

Second, the abdomen was opened by the usual incision for colotomy. The sigmoid flexure was drawn upward into the wound to its utmost extent and stitched as securely as possible. Five silk sutures were passed through one of the longitudinal bands of the gut and through the abdominal wall, and the incision closed in the usual way. For two weeks the patient was compelled to have his passages in bed in the recumbent position. After this he was allowed free exercise.

Six weeks after the operation the patient was complaining of some tenesmus and a drawing, painful sensation at the site of the incision on defecation, but there had been no reappearance of the tumor.

Three months after the operation all of the old symptoms had disappeared.—*The Post-Graduate*.

OBSERVATIONS OF THE EFFECTS OF CANNABIS INDICA IN LARGE DOSES.

*Read before the Society for the Advancement of Medical Science in the
German West Side Dispensary, May 11, 1895.*

By T. E. OERTEL, M. D.,
Pathologist to the German West Side Dispensary.

Probably all of you have read that classical work, De Quincey's "Opium Eater," and, perhaps, a few are familiar with "The Hashish Eater," by Ludlow, which deals in a most entertaining and fascinating style with the hallucinations produced by cannabis indica, a preparation made from the flowering tops of the female plant of *Cannabis sativa*, or Indian hemp. It was through a perusal of the latter work that I became interested in the physiological, and particularly the psychological, phenomena produced by this drug, and determined to acquaint myself by personal experiment with that agent which held within its grasp the joys of paradise, the terrors of death, and the horrors of hell.

I had gone with Ludlow, through the medium of his interesting book, through all the joys unspeakable—up, up to heights of bliss beyond the ken of mortal; gone to the very summit of ecstasy and then—descended like Satan hurled from Heaven into depths of darkness and despair such as few dare to fathom and live. For he drank the cup to the bitter lees, and then had strength and manhood enough remaining to fling it from him and renounce it forever, although it cost him a struggle such as only the habitues of analogous drugs can appreciate, and which even those who come forth conquerors would not face again though life itself were the stake.

It is to the record of my own experience and the observations made of the effects produced by the drug upon several of my confiding friends who, through curiosity or my importuning, consented to subjugate themselves and their individuality to the possession of the Genii of Hashish that I wish to call your attention this evening.

The dose of the solid extract of *cannabis indica*, as given in the text-books, is from 1-6 grn. to 11 grn., and, Bartholow adds, after giving the above maximum dose, "or more." None of the preparations of *cannabis indica* is reliable as to strength, being often adulterated with *Cannabis americana* or other inert material. Squibb's solid extract seems to be the most reliable one.

No case of lethal result from the use of *cannabis indica* has, so far as I have been able to ascertain, been recorded. Dangerous and most alarming symptoms, however, sometimes follow the indiscreet use of the drug. It is, in large doses, an analgesic and anesthetic, and may even induce the cataleptic state. It is also credited with aphrodisiac powers, but I have failed to note this effect in the cases about to be cited. It is a direct and powerful cerebro-spinal stimulant. The active stimulation of the cortical centers is sometimes followed by stupor, coma, or even syncope.

The fact that the sense of time is obliterated is often alarming to the person under the influence of *cannabis indica*, as he is apt to imagine that his heart has stopped beating, or that its contractions are after such great intermissions that death must result. There is generally at some time during the action of the drug a sense of impending dissolution and a horrible fear of death.

With the above data before me, you may imagine that I felt somewhat timorous, and did not care to venture too recklessly upon these unknown seas. I first took, as an experimental dose, 5 grains of Squibb's solid extract. After some two hours had elapsed there was a feeling of warmth in the stomach and an increased desire for food. At one time, for a moment only, there was an indescribable sensation as of some vivifying principle, which spread from a center in the thorax over the whole anatomy. It was as if the great sea of troubles, vexations, and multitudinous cares of life had rolled away in one huge tidal wave, and left behind only the untrammelled spirit body; and then I was myself again.

After a lapse of some days I took 15 grains of the same preparation at 11 o'clock a. m., and awaited, not without curiosity, the result that I felt would follow. At 1 o'clock I was still in my normal condition, and partook heartily of a dinner. After the meal I went back to my room, lighted my briar-wood, and sat down beside the window to enjoy an after-dinner smoke. Several cats were playing in the yard

below. I was watching their graceful, stealthy movements, and had begun to think that after all my anticipations were not to be realized, and that the boasted illusions of hashish were myths. Suddenly I again felt the strange sensation as of something earthly being lifted from me. The horizon grew dim and misty, and faded from my view like the dissolving picture of a stereopticon. I was suddenly the embodiment of a tremendous tom-cat, some two feet in height, and down in the yard with my companions, filled with a desire to put them all to flight. And yet I was calmly sitting at my window smoking my pipe, and as a man watching my other feline self in the yard below.

This feeling soon passed, and I proposed to my brother, who was with me, that we go out for a walk. After we had proceeded about two squares, and while we were conversing upon the strange experience that I had just undergone, suddenly I felt the corners of my mouth being irresistibly drawn upward toward my temples.

Up they went in spite of me, and the semi-circle thus formed seemed to become the luminous new moon, which smiled complacently down upon us twain as we walked along. I tapped my brother mysteriously on the shoulder, and informed him confidentially that I had become the new moon. Again came this distinct duality of existence. As Luna, I was suspended in the heavens looking down on myself, and in human shape I walked on earth and looked up at my other self. This hallucination continued for several minutes,—long enough for us to walk two blocks. Then I returned to my normal state, so far, at least, as outward or inward manifestations were concerned. Nor was I again under the spell of the drug until about ten minutes had elapsed.

We were just about passing a lady going in the same direction as ourselves. She had on a bonnet trimmed with black ostrich feathers. From behind one of them peered a face. Then came forth a minature devil in the conventional costume of Mephistopheles in "Faust." He capered around, kicked up his heels, and made the most ludicrous faces at me. What a funny little devil! He winked and nodded, and grinned, and contorted his features for my exclusive benefit, for nobody saw him but myself. I shouted with laughter. I was convulsed with merriment, and slapped my thigh and almost rolled on the ground in excess of glee. My brother dragged me away from the woman, who probably thought me a maniac, and had paused thunderstruck at my untoward explosion, and the little devil was lost to view.

Then I became normal, and we proceeded to a laboratory where I was working at the time, and I fed some animals upon which I was experimenting. The room was on the upper floor. While descending the stairs I imagined myself going down into the bowels of the earth. The walls were wet with moisture and green with the accumulated moss of years. Down we went, deeper and deeper, into the horrid blackness. I thought we would never reach the bottom, and that years were occupied in the descent. In walking out of the building I held my head down, and seemed to see through the top of my skull. My eyes were fixed on the floor, and yet I distinctly saw the door ahead of me, and, in fact, the whole end of the room.

My legs had grown to enormous length, and I saw my feet far below me. The sensation was such as would be produced by looking through the field lens of a telescope. I took great strides, and yet seemed to make no progress. We reached the street at last.

I remarked, "I would be all right now if I only did not have a white india-rubber mouth." I was fully persuaded that my lips were of thick, white, elastic rubber. I could not keep them still for a moment. They flew in all directions entirely beyond my control. People on the street paused and gazed at me in amazement. My brother assured me afterwards that the faces that I made transcended description.

This illusion passed away only to be superseded by another. I saw a gentleman whom I well knew coming down the street toward us, but, wonder of wonders! he was at least twenty feet in height, truly a man "mountain." I was not in the least afraid of him, but looked on him with curious interest only. It seemed to have been years since we had started on our homeward way. The street reached far into the distance, and the task of walking to the end of it appeared as great as that of walking to a star. At last we reached home, and I settled myself in an easy-chair with a sigh of relief.

In a few moments I realized that one of my legs, which I had crossed over the other, had begun to grow. On it went, around the corner of the bed and out of the door, and, behold, it was all composed of white candy. I motioned to my brother not to touch it lest he should break it off.

Then I suddenly became very thirsty. It seemed as if I should die if I did not get a drink of water at once, and I rushed into the next

room to obtain it. The first gulp transformed my throat into a vast, desert plain, across which a Niagara was rushing. I was filled with consternation, and feared I would drown, and dared not drink any more, though my thirst was devouring me, and my stomach seemed full of molten fire.

I had barely seated myself again when I realized that my heart had stopped beating. I felt that I was dying. I took out my watch and counted my pulse. Though it consumed a great length of time for it to do so, the second-hand finally crawled around the full minute, and I decided that my heart-beat was normal. But this did not reassure me. I seemed to leave my body; I felt myself rising above it, and looked down upon myself sitting there so calmly in the arm-chair, and speculated as to whether or no I should die. After viewing the case from all points, I concluded that it would be a more considerate proceeding for my friends if I were to resume my mortal shape, and so I slowly withdrew into my human form like a sluggish snail into his shell habitation.

My hallucinations were now exceedingly pleasant. Beautiful music, lovely women, scenes of the Orient, resplendent with gorgeous color, passed successively before me. I lived in fairyland, where naught was out of tune.

I ate an enormous supper. I could see down into my stomach, which was a great, black, hungry cavern, and I watched the food pass down my esophagus and fall through the darkness and accumulate in a little pile on the bottom of my stomach. How should I ever fill the vast vacancy? Starvation stared me in the face, because of my inability to eat fast enough. I devoured everything within my reach, and longed for more. I was conscious of all that was going on around me, nor did the other people at the table note anything unusual in my actions besides my tremendous capacity for food. But I was in a world of my own, and though I answered in a rational manner such questions as were put to me, my second self was engaged with thoughts and sights of which the others knew naught. I went to church with some of the family, but remember nothing of what transpired there except that the music was everlasting and more than earthly.

But enough of detail. I retired at the usual hour still under the influence of the drug, and in my dreams the visions still pursued me.

I woke in the morning in my normal condition, and felt no untoward effects of my strange experiences of the day before.

I have mentioned that I administered cannabis indica to several of my friends. I found in these cases that I could induce by suggestion any train of thought that I wished: If I told one he was falling, he would fall if I did not catch him. I performed mock surgical operations and administered anesthetics, the subject entering with zest into the spirit of everything suggested. I was assured by those upon whom the experiments were made that the sensations, as they imagined them, appeared to actually have taken place after they returned to their normal condition. In one case, toward the latter part of the effect of the drug, I was able to bring the subject out of his abnormal condition, and to again produce the receptive state at will.

My personal experiences while under the influence of cannabis indica are as real to me as are any of the actual events of my life, and every detail is still fresh in my mind, though some years have passed since I took the drug.

I will not discuss at length the psychic phenomena induced by cannabis indica, though to myself they are of exceeding interest. I believe that the state produced is closely allied to that of hypnotism. There are certainly many things in common between the two. Hypnotism has attracted considerable attention during the past few years as a possible curative agent in some of the neuroses, and is of interest from a medico-legal point. I believe that cannabis indica would prove of value as an adjunct in producing the hypnotic state in such cases as are not easily influenced.

When we speculate upon the action of the mind and upon the influences that dominate it, we are treading upon uncertain ground, but surely the hallucinations produced by hashish are of more than passing interest to those of us who would intrude still further into this mystic realm.

New York, 210 W. 44th street.

—*The Am. Medico-Surgical Bulletin.*

MARY FLETCHER HOSPITAL.

It is very natural, noted as it is for its charitable institutions, that Burlington should have a hospital which is a source of admiration to all who visit it. We often hear people make the remark of "God forbid that I should ever be taken to a hospital," but when they enter one of the modern hospitals and observe the matchless system, the unequaled opportunities for accomplishing the object desired, and the solicitous care of the patients, their prejudices vanish and they realize that a sick man's chances for recovery are increased 100 per cent. under hospital treatment, for if careful nursing, and the best of treatment avail anything, the hospital patient will recover. Regularity is the rule, *and the rules are obeyed*. From the time a patient enters the hospital and is assigned to a ward, to the time he is discharged, he is watched and accorded care such as is almost impossible for him to receive in his own home. There is no confusion, nor irritating surroundings, for these have been especially eliminated from the present day hospital, since quiet has become such a recognized factor in curing disease.

Mary Fletcher Hospital, which is situated between Burlington and Winooski, on a high eminence of ground, is the result of the beneficence of Mary Fletcher. It was opened for the treatment of patients in 1876, but many additions and improvements have been made, until now 70 patients can be accommodated at one time. There are two wards for male and female patients, besides the private rooms in the main building. There is also an out-patient department. The operating room is a model one embodying the best of facilities, as does the adjoining room for ophthalmic work. Connected with the main building by a corridor is the amphitheatre, seating 200 persons, in which are held the medical and surgical clinics of the Medical College. The clinics are varied and of great range, thus proving of much value to the students in attendance. The private work of the Hospital in surgery is highly important and the best of results are obtained.

The House Staff consists of the Superintendent, Dr. B. J. Andrews, and three House surgeons, Dr. Guy L. Noyes, Dr. M. F. Mc-



MARY FLETCHER HOSPITAL.

Guire and Dr. D. C. Calder. There are fifteen nurses besides a reserve force. The remainder of the Hospital Staff for the current year are :

Attending physicians—Dr. H. R. Watkins, Dr. P. E. McSweeney, Dr. S. E. Maynard, Dr. W. R. Prime.

Attending surgeons—Dr. L. M. Bingham, Dr. J. B. Wheeler, Dr. D. C. Hawley, Dr. H. C. Tinkham.

Ophthalmologist and laryngologist—Dr. J. H. Woodward.

Consulting physicians—Dr. A. P. Grinnell of Burlington, Dr. L. F. Burdick of Winooski, Dr. A. C. Bailey of West Randolph, Dr. A. T. Arkley of Essex Junction.

Consulting surgeons—Dr. Henry James of Waterbury, Dr. A. M. Phelps of New York city, Dr. W. B. Lund of Burlington, Dr. William Platt of Shoreham.

As a whole, the work of the Hospital has been highly satisfactory. Efficient management has triumphed over such difficulties as arose, and no one can find a word of fault. There is no doubt that the Hospital is cramped for room, for it has been crowded to its fullest extent for some time. Improvements and more additions are urgently needed but the wherewithal is not forthcoming. A liberal endowment just at this time would prove a wonderful help. A children's ward and an opthalmic ward are necessities and if a new separate administration building could be built it would sufficiently increase the rooms for private patients in the main building. These things are sure to come in time, but they are needed now. Mary Fletcher Hospital is doing too grand a work to be held back by a lack of room. Its situation, commanding one of the grandest views in this country, its able management and past success will greatly aid its progress in years to come, and its future possibilities as a power for good are beyond the focus of our eyes. We are justly proud of Mary Fletcher Hospital and feel that now is the "time to strike" in order to insure a lasting success in the future.

NEW TREATMENT OF SEPSIS.

By DR. B. BECKER, Toledo, Ohio.

As the most modern treatment of general septicæmia we note the recommendation of *hypodermical injections of creasote*, introduced by Dr. Frank, of Cologne in Germany. From the number of cases successfully treated by this method, the following from Dr. Merthens at Dusseldorf, is certainly of great interest.

The patient was a woman on whom, for sufficient reasons, premature labor was to be induced by the introduction of a bougi into the uterus. The instrument remained in position for four days, when it was removed on account of fever, the thermometer registering 103.1. The fever continued, and reached after three days, 104.0, with chills. Labor was ended by turning. On the next following day the fever was 104.5, with a pulse of 140 to 150. After the injection of creasote the temperature fell down to normal. The same result was obtained by the same procedure on the third day in the morning and the evening, when a temperature of 104.0 was brought down to normal; also, the pulse decreased rapidly. The temperature remained now normal, while three injections of creasote were made daily. Patient recovered.

A direct antibacterial effect of the creasote is doubted, as also in tuberculosis the newest experiments have proven that a direct action of the creasote on the bacilli of tuberculosis does not exist. Of the greatest value, however, is the antifebrile and symptomatic effect of the creasote. Coincidentally with the decrease of the temperature and pulse, the patient always felt so well and comfortable, that she demanded the repetition of the injections when she thought them indicated.

The creasote was used in a solution with equal parts of camphorated oil, of which 20 minims were injected three times a day. It is thought that this daily dose can be increased without any harm, as a reaction was not observed.

This therapeutic procedure is certainly worthy of further extensive trial by the profession at large, and can be recommended with by far less hesitation, than the intravenous injection of sublimate solution, advised and successfully practiced by Kezmaregky for the same dreadful condition of septicæmia of various origin.—*Charlotte Med. Jour.*

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All communications of any nature whatsoever should be addressed to H. EDWIN LEWIS,
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EDITORIALS.

THE DECLINE OF DRUG ADMINISTRATION.

Although there are many of our present-day physicians who are of the opinion that every patient brought to their notice must commence treatment with some prescription, there is evidently a growing tendency to decrease the amounts of drugs and substitute good common-sense.

Nature is an extremely fastidious mistress and a great number of those who present themselves for medical treatment are only violating some of her numerous laws. A little wholesome advice and the judicious use of that best of all remedies, "common-sense," will accomplish wonders. Drugs only should come in as an auxiliary measure, for their legitimate mission is simply to assist Nature back to an equi-

librium, and when careful exercise and dieting will relieve a weary stomach, or some other distressing condition, it is an abuse of medicine to administer a complex prescription.

To be sure, we are familiar enough with human nature and the idiosyncracies of the human family, to appreciate the other side of the question, for we have met people who were never happy and well unless "taking something," even though it was the proverbial "bread pill."

This class is frequently seen, but the average physician has too much respect for himself to allow the laity to dictate to him their needs.

His education and experience must be the judge of their ailments, and if the situation does not *demand* the administration of some drug, he will not so ignore his knowledge as to allow his patient to believe that a prescription is absolutely necessary.

This may cause pecuniary loss for a time, but not for long for the people will learn to honor a physician who dares to tell the truth. Besides it is worth just about 500 dollars a minute to retain ones self respect.

Let the Quack and patent medicine vender ply their trade. Like the poor the gullible class are with us always, but medical men are too honorable to practice on their weakmindedness.

Medical science leads the van of progress, and hygienic medicine is bound to reduce the necessity of drug administration. The strongest opposition will come from the people at large, but "truth and right will prevail."

MEDICAL ABSTRACTS.

CHLORIDE OF LIME IN SNAKE-BITE.—Drs. Phisalix and Bertrand (Med. Week 1895, IV, p. 307).

Various substances have been suggested as antidotes of snake poison—chlorine, bromine, iodine, and various combinations of these, such as trichloride of iodine and the hypochlorites. The latter specially have been recommended by Dr. Calmette, who claims that in addition to their power of counteracting snake poison, these substances possess the property of producing the same vaccinal reaction as heated venom. The authors have carried out a series of experiments with a solution of chloride of lime (calcium hypochlorite) the results of which seem to show that this substance protects the organism against the bite of venomous snakes—not, as Dr. Calmette assumes, by determining the formation of an anti-toxic substance or by entering the circulation and there destroying the venom, as it does in a test tube, but purely by its local action.

It destroys the poison and mortifies the tissues, thus interfering with the absorption of the poisonous matter.

It follows, therefore, as a practical application of this fact that injections of chloride of lime at another point than that of the bite have no immunising effect, and are consequently useless. If this antidote be employed, it should be injected deeply under the skin at the very spot where the fangs of the snake have entered.

DISTRIBUTION OF HAIR ON THE HUMAN BODY.—Jonathan Hutchinson in the *Archives of Surgery* says: It is well known that hairy men are common, hairy women exceedingly rare. Both in men and women at puberty hair makes its appearance in the axillæ and on the genitals, and its luxuriance is in some relation to the vigor of the individual. In men at this time hair grows on the face, trunk and limbs; at times also in the ears and nose. In women hair is rarely seen in the nose and ears. The eyebrows of women are always restrained, while in men they often grow very heavy. The scalp hair of women is much more abundant and long than that of men. This may be, because woman have no hair on the face. Hairy men are usually bald men, and so very often are bushy-bearded men; any protracted or debilitating disease in a young person may be attended by a general growth of weak hair over the body. As a rule, the more perfect the sexual health in a male the more luxuriant the sexual hair, and the reverse in women.

SUICIDES AND INSURANCE.—Suicides are on the increase. In New York there is a suicide club. One member is bound to commit self-destruction by a new

method at stated intervals "for the good of mankind." Are these people sane or insane? If they were insured the verdict would be "insane." The application for insurance should hereafter ask, "Are you a member of a suicide club?" If yes, exclude.—*The Medical Examiner*.

A CURE FOR APPENDICITIS.—Of late years a dread has gone abroad that every one who eats fruits with small seeds in them is pretty sure to run the risk of dying from appendicitis, or be forced to undergo a dangerous operation. So strong has this dread taken hold of the public mind that thousands refuse to eat small fruits when seeds have to be eaten with them. Grapes are always pitted by them, and blackberries, and even raspberries, with their small, insidious seeds, are taken entirely from the bill of fare.

The fact is that appendicitis occurs very rarely, and the percentage of people who eat fruit with seeds in them that are caught is insignificantly small. When the complaint does seize one it is not necessary to resort to an operation, except in severe cases, nor is it absolutely necessary to die. The most successful cure is to administer internally from one to two ounces of sweet oil every three hours until the pain and fever are relieved.

The seed which causes the trouble irritates the muscular tissue so that congestion follows, and this may soon cause inflammation of a very serious character. Sweet oil, administered in time and faithfully, allays the inflammatory condition, reduces temperature and relaxes the tension of the muscular coating of the intestines and appendix. Besides that it takes seed or all foreign substances with it and effects a complete cure. The patient should be kept in bed and poultices should be applied very hot over the seat of pain.—*Times and Register*.

A NEW PROCESS FOR INCREASING THE SOLUBILITY OF SALICYLIC ACID.—Salicylic acid has been recommended as a substitute for bichloride of mercury in surgical and gynæcological practice, on account of the highly poisonous character of the mercurial salt; but as the very slight solubility of salicylic acid has been an obstacle to its employment for this purpose, the authors submit the following formula:

R Boracic acid, parts xij.
 Salicylic acid, parts ij.
 Water, parts 1000.

By heating this mixture a solution is rapidly obtained, which does not form any precipitate on cooling.—*Ex*.

RESUSCITATION FROM ELECTRICAL SHOCK.—The use of electricity in the various arts and sciences is extending so rapidly that physicians are now liable to have calls to treat cases of unconsciousness or injuries accidentally caused by

that agent. It is important to know that even very severe shocks often do not prove fatal. Persons may be apparently dead and yet may be resuscitated by the proper measures, timely employed.

A person apparently dead from lightning stroke or other electric shock is to be treated as one apparently drowned, excepting that there is no water in the respiratory passages to complicate the treatment.

Artificial respiration should be employed, preferably by the method of rhythmical traction upon the tongue. Rhythmical compression of the region over the heart should be employed, about one hundred times per minute. Efforts to stimulate the functional activity of lungs and heart should be continued for an hour or more, as persons have been resuscitated when it seemed entirely hopeless.—*The Medical World*.

FORCEPS AND FACIAL PARALYSIS IN AN INFANT—Laskine (*Progres med*, May 11, 1895; *Brit. Med. Jour.*, 1895, No. 1797, p. 91).—The author speaks of an instrumental labor where the mother was a primipara, aged 22. After she had been in labor for fifty-four hours the forceps were applied. A large child, weighing nearly 10 lbs. 4 oz., was delivered; the perineum was torn. The child had facial paralysis, which was treated by the interrupted current. At the end of two months the condition had disappeared. Laskine admitted that the child's father had syphilis. Altogether, however, he thought the evidence was in favor of the opinion that the paralysis was caused by injury with the forceps. This complication took, he thought, long to cure. Gaulard, in a discussion on the case, knew of another far more chronic instance of the same lesion, for one of his colleagues, about 40 years old, still suffered from facial palsy, caused by the forceps when he was brought into the world.—*Ex*.

CODEINE AND ZINC SULPHOCARBOLATE IN DIARRHEAS.—Dr. J. M. Shaller (*West. Med. and Surg. Rep.*, 1895, VII, p. 92).—In diarrhea occurring during phthisis, typhoid fever, or influenza, or resulting from any cause, the author has had excellent results from the use of tablets each containing the following :

Codeine Sulphate, $\frac{1}{4}$ gr. ($1\frac{1}{2}$ ctg.)

Zinc Sulphocarbolate, 1 gr. (6 ctg.)

Hyoscyam (Amorph.) 1.250 gr. ($\frac{1}{4}$ mg.)

Strychnine Sulphate, 1.130 gr. ($\frac{1}{2}$ mg.)

In severe colic or diarrhea, adults take one or even two tablets, every hour or every two hours, until some improvement is manifested. Then one tablet is taken when the pain returns, or after each stool.

This treatment is recommended in colic and in all painful affections of the gastro-intestinal canal, even dysentery. When pain follows immediately after meals, or a few hours after, it is particularly valuable, it is said.

Codeine, as a means of relieving all painful affections of the gastro-intestinal canal, is undoubtedly better than any other opiate. It also checks hypo-secretions and excessive peristaltic movement. Hyoscyamine controls all spasmodic contractions of the involuntary muscles, and also checks secretions. Zinc sulphocarbolate ranks among the first as an antiseptic; and, by means of its astringency it also checks secretion. Strychnine, through its action on the cerebro-spinal nerves, improves the therapeutic value of nearly all medicines, and increases nerve action and muscular tonicity, all of which are of value in the class of diseases under consideration.—*Ex.*

DIET IN TYPHOID.—In an average patient and in an ordinary case of typhoid fever two pints of milk and one pint of beef tea is sufficient nourishment in twenty-four hours. The intervals of feeding should be three hours; longer intervals through the night should be allowed. The tendency in typhoid fever is overfeed.

If the patient's condition be good and he sleeps well, he should be allowed to sleep the usual hours, say from eleven o'clock to five in the morning, without being disturbed.

Careful and frequent inspection of the stools should be insisted upon, and should a tendency to looseness of bowels or indigested milk be manifest, the symptoms should be promptly met by a withdrawal or diminution in quantity, or a change in the mode of administration.

However ardently fruit may be craved, as a rule it is not allowable in typhoid fever. The fluid of an orange or lemonade, however, may be allowed if no diarrhea exist.—*Amer. Pract. and News.*

SALICYLATE OF SODA IN GRAVES'S DISEASE.—Chibret (*Jour. de Med.*, April 10, 1895; *Brit. Med. Jour.*, 1895, No. 1797, p. 91).—Chibret speaks of the good results he obtained in the treatment of exophthalmic goiter by salicylate of soda. In each of four cases marked improvement took place in a few days, particularly in one case—a man who was totally incapacitated, but who was much better in six days, and able for field labor in a month. In others the symptoms returned on suspending the drug, although it seemed in one instance that after two years it could be much reduced without bad effect. If, however, the patient was over-fatigued or chilled, the salicylate was taken in order to prevent any return of the symptoms. The writer was led to try this treatment by finding a family arthritic history.

SYMMETRICAL LABIAL HERPES FOLLOWING A FALL ON THE HEAD.—Fitzgerald Isdell (*Brit. Med. Jour.*, 1894, p. 1427).—A man 69 years old missed his footing

while getting into a car and fell directly backward. His head was partially protected by his hat, but the blow left a tingling sensation in both sides of the lower jaw, and one week later a severe herpes of the lower lip occurred. The point of contusion was a little to the right of the occipital protuberance, and the herpes was more severe on the right side of the lip than on the left.

TYPHOID FEVER IN INFANTS.—It was believed for many years that infants were immune against this disease. The disease called "infantile remittent fever" was very probably typhoid fever. There is no difference in the anatomical lesions in the infant than that which exist in the adult.

As far as infants are concerned, the proof of the presence of the bacilli is still negative. The swelling of Peyer's patches shows itself early, and is most frequently seen near the ileocæcal valve. It is suggested that the difference in the amount of destruction may be due to the bland food which infants commonly take.

In the infant, restlessness is marked and fever persists for days, with only slight irritation of the gastro-enteric tract. The temperature, which usually ranges higher than in adults, is well borne. There is usually nothing characteristic in the appearance of the tongue; vomiting is rare; the appetite uncertain. Constipation is usually persistent throughout the entire course of the disease. The typical spots are rarely seen. Tympany is rare; hæmorrhage is also rare. The spleen if enlarged is detected with difficulty. The liver and kidneys are probably unaffected. Epistaxis is rare as is also bronchitis. Relapses are not infrequent.—*The Charlotte Med. Journal.*

NEWS NOTES AND FORMULA.

Strong coffee is a valuable stimulant in slow labor pains.

Try small doses of sodium salicylate in eruptive diseases.

Try turpentine, five to ten drops at bed-time, in lumbago.

QUICK METHOD OF REMOVING PLASTER DRESSINGS.—At the time the bandage is applied Dr. Gigli (*Annales d'orthopedie*, February, 1895) places under it a string covered by a strip of parchment paper; the ends of this string are tied together outside. When the dressing is to be removed, this string serves to draw a fine wire saw beneath the plaster. This is directed with its cutting edge outward against the plaster, the ends are fastened in the handle of an ordinary chain saw, and the plaster is quickly sawed through from within outward.

UREMIA.—Dr. L. D. Kastenbine highly recommends :

R. Tinct. Ferri Chloridi, $\frac{1}{2}$ oz.
Spiritus Etheris Nitrosi, 1 oz.
Liq. Ammon. Acetatis, 1 oz.
Aquæ Dest, $2\frac{1}{2}$ oz.

M. et fiat mistura. Sig. Tablespoonful in a wine-glass of water.—*Louisville Med. Monthly*.

A SUGGESTION FOR INCREASING THE FLOW OF MILK.—Too many mothers have not quite enough milk for baby, and desire to increase the amount. A most successful doctor recommended, with best results, a very simple thing that he said never failed in such cases. It was putting olive oil on the breast several times a day and rubbing it in with gentle yet firm massage toward the nipple. The oil

acts as a food, while the massage empties and stimulates the milk glands. A decided improvement can be seen in two or three days.—*The Medical World*.

GASTRALGIA.— R. Spts Chloroformi, 1 oz.
Ext. Cannabis Ind. Fl., 2½ dr.
Aq. Menthæ Pip., 5½ dr.
M. Sig. Teaspoonful.

It is claimed that ignatia amara will destroy the taste for tobacco.

The free use of belladonna is recommended in abdominal obstruction.

Local applications of sulphur to the throat are very efficacious in diphtheria.

URIC ACID.—When the production of uric acid rises above the normal it is simply a symptom found in the urine which indicates an imperfect state of proteid oxidation, and a general condition of malnutrition. This suboxidation may be caused by many different conditions acting singly, or in combination—causes which may arise either in the nervous, digestive, circulatory, or in the respiratory system.—*Am. Med. Surg. Bulletin*.

ALBUMINURIA.—Corrosive sublimate is a good test for albumen in the urine. Add to the urine a few drops of a one per cent. solution. If there is turbidity add acetic acid—if turbidity persists, albumen is present.—*The Med. Brief*.

TEST FOR SUGAR IN THE URINE.—The *New York Medical Times* gives the following test for sugar in the urine: Add to a small quantity of urine the same amount of saturated solution of picric acid. To this add half as much more liquor potass. If sugar is present the color becomes very dark and opaque. If no sugar is present the color is a handsome bright red.

TOOTHACHE.— R. Dry alcoholic Ex. Opium, 8 gr.
Camphor, 8 gr.
Balsam Peru, 16 gr.
Mastic, 16 gr.
Chloroform, 2½ dr.

Introduced into the cavity it calms the pain at once.

OXYGEN IN OPIUM POISONING.—W. J. C. Merry, London, reports a case of opium poisoning treated by inhalation of pure oxygen. This was given in such a way that only the pure gas, undiluted with air was inhaled, and this was continued without interruption for twenty minutes. Under this treatment the livid color of the skin disappeared, the respirations occurred more frequently and fuller, the pulse improved, and the patient made a speedy recovery.—*London Lancet*.

ASTHMA.—The following will be found most useful in this distressing complaint :

R. Chloralis, $\frac{1}{2}$ dr.
Potassi Iodi, $\frac{1}{2}$ dr.
Syr. Auranti, 6 dr.
Aquæ, 42 dr.

M. Sig. Two to three tablespoonfuls a day.—*Coll. and Clin. Record*.

NEPHRITIS.—

R. Potass. nitratis, gr. xv.
Pulv. scillæ.
Pulv. pimentæ, aa gr. x.

Sig. One three times a day.—*Swediaur, Ex.*

PUBLISHER'S DEPARTMENT.

ACUTE MANIA.

By W. H. DEWITT, M. D.

*Extract from a paper read before the Academy of Medicine of Cincinnati,
May 13th, 1895.*

The medical treatment of these cases is very simple, and can be disposed of in a few words. To procure sleep and quiet is perhaps the greatest desideratum, and I know of nothing so certain in its action as chloral hydrate, given in 40 or 60 grains. It may be given alone or combined with one of the bromides. The "Bromidia" of Battle & Co. I have always found very reliable. It is almost certain to quiet and produce sleep. You will occasionally meet with cases that resist the influence of chloral even in large repeated doses; here opium or some one of its derivatives, either given alone or in connection with the chloral, will be found of service. If hypodermically administered, not less than one-third grain should be given. Small doses only excite the patient, and do more harm than good. Hydrobromate of hyosine has some advocates. The milder hypnotics, such as sulfonal, chloralamid, etc., are not to be thought of in these cases; they are practically inert, and do no good.—*Lancet-Clinic*, June 22, 1895.

Instead of malt extracts use Taka-Diastase, for starch digestion, made by Parke, Davis & Co, Detroit, Mich.

Insure in the "National Life."

(From the Chicago Clinique, Dec., 1894.)

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September, 1895.

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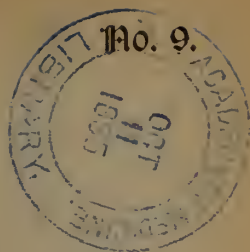
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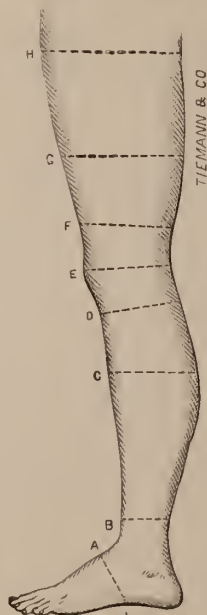
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Medical Sciences.*

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(Original Papers)

THE NERVOUS AND MENTAL DERANGEMENTS OF YOUNG WOMEN.

By FRANK PARSONS NORBURY, M. D., St. Louis, Mo.

(Late of Jacksonville, Ill.)

*Professor of the Practice of Medicine and Clinical Medicine, St. Louis
College of Physicians and Surgeons; Professor of Cranio-Cerebral
Surgery, Woman's Medical College, St. Louis; Managing
Editor of the Medical Fortnightly, of St. Louis; Lecturer
on Psycho-Physies, Illinois College, Jacksonville, Ill.;
Formerly Asst. Physician Illinois Central Hospital
for the Insane; Formerly Resident Physician
Pennsylvania Institution for Feeble
Minded Children.*

The adolescent period of a woman's life offers a field for investigation but little understood and too frequently ignored by the average family physician.

Viewed by the neurologist it is a kaleidoscopic picture painted on the dusk brown background of heredity; colored by environment, with hues as varied as education, hygiene and habits can make them. Strange is the mechanism and complicated the technique, necessary to draw a picture that will adequately present the varied degrees of nervousness in young women. Confronted, as we are, with disturbances varying from slight minor ailments to the perplexing and oftentimes indeterminable conditions upon which rest the most profound nervous disorders, it is evident that to solve these problems, we must

make a patient inquiry into all the symptoms presented. Dogmatic assertions will not unravel the subjective feelings, or the querulous experiences of a nervous young woman. Hence, the family physician must be cautious and not, through the supposed kindness of his heart, say that the troubles are insignificant. So frequently indeed have I met with cases where the trusted medical adviser, has, by a hasty snap shot diagnosis, made his patient justly incredulous by his dogmatism and positiveness, that I now appeal for discriminating attention even to the most minute details and the use of extraordinary care in the methods of diagnosis, in studying nervousness in young women.

More than cursory notice is needed to construe symptoms; they may be trifles in themselves, but when taken collectively they penetrate to the very foundation of a nervous being. In this day of "degeneration," when, as Nordau says, there is an increase of nervous irritability far beyond that of any other time, we must be conservative in our analysis of cases. It is true hysteria and degeneration have existed for all time; but again Nordau reminds us that we are living in a generation when vast fatigue exists, due to the discoveries and innovations bursting abruptly upon us, imposing upon this generation organic exigencies greatly surpassing its strength, thus creating favorable conditions under which these nervous maladies have gained enormously and have even threatened civilization. Even the rural districts have felt this invasion, but it is in the great cities and college centres that this oppression is most profound in young women. Living as I do in a college town, I have noticed this weakened nervous tendency in the ambitious college woman, which undoubtedly is a heritage of civilization. It is a formidable foe, demanding from us, as physicians, our best efforts to confront.

That heredity is the background of the picture is evident, and even the most casual observer notices what environment has to do in nourishing the hereditary spark into a flame of destruction oftentimes appalling. The secret springs of a woman's life are here depicted. The physician's training enables him to read "Ichabod" upon the vaunted intellectual power and physical strength of such an individual. For Mother Nature is kind to us, but she insists upon a balance of her ledger, and to this end has established her beneficent laws of heredity. Now by heredity I do not mean merely the transmission of family traits, features, moods, methods, and racial peculiarities, but that broader, grander and more sublime law of the maintenance of the

normal type of human species. Its workings are manifested first in an evolutionary process, which has for its object the building up and the preservation of all that is good or tends to benefit the race ; second, a degenerative process, which eliminates false quantities and errors, not even considering the prodigality of life, or the extinction of families oftentimes necessary in executing the purposes of the law. With these two primary principles as a basis, transmission of conditions obnoxious to the highest normal development of a human being is better understood. Unsuitable unions, either of too similar or too markedly dissimilar beings, affects the developmental impetus of the germ; resulting either in imperfect evolution of the nervous system or a complexity and elaborateness of nervous development, especially of the higher nerve regions. Such complexity has with it a corresponding tendency to disorganization and dissolution. We notice in the interchangeable and the direct transmission of neurosis, evidences confirming the theory of complexity being a deterioration, a part of the whole of the greater degeneration.

Such morbid heredity is due, as Fere says, to an accumulation, a capitalization, so to speak, of variations of nervous states or conditions. Civilization favors the production of such exceptional beings ; it produces variations and defections, the provocative conditions being the result of exhaustion of nerve force or impulse necessary to normal development. During the periods of infancy and childhood these nervous anomalies may be shown, but it is not until the adolescent period that we see clearly the out-cropping of a good or bad heredity. This period is of all others the most interesting in the study of nervous diseases ; here we see the evolution of new functions ; the hereditary potentialities commencing in earnest their warfare with environment and education ; the taking on of those characteristics, nervous and mental, which are to determine largely the life history of the individual.

What an important period then is adolescence, and carefully must the physician undertake its study if he desires to render the most scientific service. In young women the period extending from 13 to 20 is the most important in her life ; it is full of dangers ; then it is that the nascent instincts of her womanhood are generated and weave themselves into the web of her life ; her sexual proclivities are then evolved and the greatest of these, menstruation, is established. This phenomenon, which is nervous in origin and periodic in character,

intensely affects and modifies her life's history. T. Gaillard Thomas, says, "that eight-tenths of all diseases peculiar to women begin at one of the four great epochs of her life, viz: puberty, marriage, child-birth and the menopause." The neurologist will tell you this is also true of the nervous disorders of women. The adolescent period in woman may embrace three of these epochs, viz: puberty, marriage and child-birth; hence, the greater exposure to nervous disorders during this period.

Woman's normal psychology is more complex than that of man, due to her sexual characteristics, and during adolescence mental habits which may or may not eventuate into pycshoses are inaugurated. By reason of the epochs of marriage and child-birth affecting the mental equilibrium of woman, we can understand what we have to contend with in this formative period of woman's life. Clonston has given us a thorough elaboration of the co-relation of adolescence to diseases of the mind; he shows that the mental changes incident to adolescence are due largely to a long heredity of civilization.

The potential affections for lover, husband and child which are evolved at this period are powerful factors which need consideration far greater than is usually accorded them. Again, if the girl enters puberty free from mal-development of her uterus and tubes and without grave functional disturbances of these organs, her sailing through the period of adolescence is likely to be smooth. If puberty is stormy, due to failure of the sexual functions to be correctly inaugurated, it is an evil foreboding. Many minor ailments will be prominent, but what is most dreaded are the grave nervous disturbances, such as hysteria, epilepsy and hysterio-epilepsy. I have seen several such cases which I am sure were due to malformed ovaries or other uterine appendages. Dermoid cysts of the ovary, which may have been dormant until the period of puberty, can and do cause profound nervous symptoms. I saw in consultation a few years ago, such a case. Surgical interference revealed a dermoid cyst of the left ovary. Goelet has called attention to the presence of fibroid tumors at this period causing nervous disorders. Mal-development of the uterus and appendages may follow infectious diseases and be responsible for nervous disease, by both the irritation and the results of the infectional processes of the disease on the nervous system. I saw this past winter such a case, where both these influences combined to produce a severe and prolonged case of neurasthenia.

Overworked school girls entering the period of puberty are doubly exposed to nervous disease when afflicted with any of the infectious or self-limited diseases, especially scarlet fever and typhoid fever. This is to be accounted for by the previous depression and irritability of the nervous system and the subsequent intoxication from the products of the disease. Mayer has called attention to typhoid fever as a cause of true psychoses by infection. The psychoses are more frequent than the neuroses. This has been my experience, especially if the typhoid fever occurs in young girls having neuropathic history. I saw in consultation in 1891 a young lady having some slight hereditary history of nervous disease; age twenty; single; who in the second week of typhoid fever became insane. A case of typho-mania. Her maniacal excitement continued for several weeks, and life was despaired of. However, after six weeks she commenced to improve physically and at the end of eleven weeks showed signs of returning reason. She made a good recovery about the end of the fourth month. This was no unusual case, excepting the development of the psychoses at the early appearance of the fever. I have had a number of such cases, all showing that the mental state was due to altered nutrition, and this due to nervous changes, the result of the infection.

It is only within recent years that clinical study has been given to this subject. Mayer says: "An examination of our clinical and autopsy records will show a deplorable lack of observation in this field." The pathology of nervous disorders is as yet in its developmental stages, so it is not to be wondered at that such negligence has been noticed.

The intimacy of the nutritive, nervous and sexual systems is being studied, and so far the evidence is great, showing their interdependence. The adolescent period of all others is the one when the integrity of these three systems should be intact. Nutrition demands it—the development of the sexual organs demand it—and the mental and nervous stability of the individual demands it. To insure a perfect and well-rounded physical development, these three systems must be in harmony. This mutual dependence must not be interfered with.

Let us consider some of the special causes of nervousness in young women:

First—over ambitious application in study. Pedagogues would have us believe that we are mistaken in our opposition to close application to study during the formative period of womanhood. They insist

there is no crowding, no overloading of the nervous system with work, and no improper hygienic conditions to modify unfavorably the tendency towards exhaustion. My experience teaches me the contrary here in our own college community. Especially does this apply to the students of music. My observation has been considerable, but unfortunately interrupted in some cases. However, enough information has been gathered to enable me to say that music is a powerful factor in the causation of nervousness in young women. It affects the entire nervous system, which under normal conditions is beneficial, but when hampered by abnormal fatigue, it intensifies the neurasthenic state and even may make it chronic. Music affects the nervous system in two ways: first, through the excito-motor fibres; second, through the inhibitory fibres. Joyful, light, exhilarating music resounds along the excito-motor fibres, while sad and lugubrious music, through the inhibitory fibres, checks and inhibits contractions. These effects, when continuous, disturb the physiological action of the heart, the lungs, the digestion, through the sympathetic nerves.

Exhaustion is profound in some cases of nervousness in young women students of music. The mechanism is allied to that of genuine neurasthenia, and is in the following order of appearance: First, over-fatigue, muscular, from long practice; second, sensory disturbance from continuous stimulation of organ of hearing and of vision, also touch; third, the emotional control is disturbed through effect on inhibitory centres; fourth, disturbance of sleep from abnormal fatigue; fifth, peripheral nerve disturbance, numbness and tactile perversion. The climax is represented when the hysterical state is engrafted, and then we have a well marked case of nervousness from overwork. Tarchanoff, of St. Petersburg, says, "Music is a serious therapeutic agent, and it exercises a genuine and considerable influence over the functions of the body." I am inclined to believe its influence on the adolescent woman when followed by exhaustion is serious. Emmett, I believe, has said that arrested development of the ovaries and uterus can follow over-stimulation by music. Music causes over-stimulation of the sympathetic nerves. Over-stimulation means exhaustion, exhaustion means mal-nutrition, and mal-nutrition means mal-development. I could enlarge upon this point, but this is sufficient. I would enlist your co-operation in investigating this most potent influence in nervousness.

Other educational influences are also entitled to our consideration. For years the writer has heard, as doubtless you all have, that certain studies should be pursued for the mental discipline they give. One educator will say the classics, another that mathematics will round out the powers of reason and give the elements so necessary to culture. The student listens to the suggestions and then elects her course; if ambitious she works assiduously to master the intricacies of language, of the puzzling figures of mathematics. The seemingly well selected course which she has taken to fill in the remaining hours of the day contribute to spur her on to hard work. The result is she has more than she can handle without fatigue, and sooner or later a break comes which leads to the inauguration of a life of nervousness. I have repeatedly seen such cases, some very sad ones. Just lately I saw a young lady who was taking a four years' course in three years—a classical course—in preparation for work as a missionary in Africa. She worked from five a. m. until ten p. m., even taking with her books to her meals. This in a school dormitory presided over by a matron and superintended by a well known educator. Now the break came in her first year, continued in the second, and reached its climax in the third, when the young lady became insane. What real worth was her education? Was it not a case of culture under pressure, which means false results? The use of the classics in preparation to teach the Africans may be questioned, too. There is a great deal of truth in what Herbert Spencer says, viz: "Men dress their children's minds as they do their bodies, in the prevailing fashion." It strikes me there is considerable waste of time and labor in the so-called classical education. "Usefulness," says Skene, "is the chief thing to consider." Ill health is too frequently the prize drawn at graduation, and no young woman is fitted to become wife or mother under such a load of nervousness.

Women's mental training should be, as all education should be, in the line of what is to be their vocation. Physical health first, so-called culture second. The co-mental training and discipline can go on in development, with the physical, and should go hand in hand with it. It is of far greater importance to women that she be sound in body and mind than to hold the prize for Greek translation, composition, or what not; there would be less nervousness and better developed children. Nervousness in women can best be cured by having the woman well born—from such a heredity health will come.

Now as to other causes of nervousness, we may add faulty training. I have seen cases of mental disease, the direct result of the lack of enforcement of parental control. Young girls when reaching the age of puberty have had, perhaps, a tendency toward abnormal excitement, adventure, etc., which if held in abeyance would have been used toward the better development of the girl, but allowed to run riot has completely enveloped the womanly instincts and let the abnormal develop. A young woman should have a reserve power, but if excitement, lack of rest, and unusual calls upon her vitality be made, she will succumb to the inevitable and become a nervous wreck. Clark has taught us the need of rest for a girl at her periods, and the need of keeping quiescent her sexual tendencies. It is through the abnormal excitement growing out of promiscuous gatherings, late hours and prolonged fatigue, that the hysterical girl develops. I have seen many such cases, and say what we will, we must acknowledge the sexual element as the base of the trouble. Young women should know their own bodies and the functions of their special organs—"forewarned, forearmed." In many cases of hysterical insanity and allied conditions we find associated unnatural sexual excitement and gratification. I know this to be true, and I know further that there are many cases of hysteria occurring among young society ladies, that have the same foundation. The confessions of a society woman are not all as stated in a book by that name; there are others which we, as physicians, know. To prevent, we insist that parental instruction and control is imperative.

Again we need to insist upon exercise as necessary toward the development of woman. We need to encourage it, for the lack of it is seen in the house bound young ladies, the fashionable invalids, and the tender sensitive creatures who demand so much of the physician's time. I believe exercise imperative, and welcome the introduction of the bicycle as "the thing" among the fashionable of to-day. It means a great deal, and I hope from Newport this fad will spread to every city, hamlet, village and cross roads in the United States. We need it, and the introduction means progress in medicine and the lessening of causes of nervous and mental diseases.

In conclusion let me say that my paper has been more the mechanism and the causes of nervous and mental disease, than the consideration of the subject as a whole. It is too great to be treated in one

paper, for the symptoms and treatment each are entitled to consideration, requiring more elaboration than the causes.

Our literature is not very great in this phase of young women's diseases, and hence I would encourage you to contribute to it. I have in mind a compilation of cases, with a detailed study of symptoms and diagnosis, with a view of embracing the medical treatment, so as to add to the recent interest shown in medical gynecology. The neurologist must familiarize himself with such facts; so must the general practitioner. Let us work together.—*The Denver Medical Times.*

A PRACTICAL POINT IN THE USE OF DISINFECTANTS AND ANTISEPTICS.

BY A. G. YOUNG, M. D., Augusta, Me.,
Secretary of the State Board of Health.

In the large mass of literature which has appeared on the same subject since Koch's paper, "On Disinfection," it is rather surprising that the practical value of one of the suggestions in that paper was not more promptly apprehended and worked out. It was contained in this paragraph:

"Yet it is probable that many disinfecting agents which, under ordinary circumstances are inefficient, may become sufficiently active when combined with moderately increased temperatures; possibly also some such substances which have no disinfecting action at all at temperatures in the neighborhood of 20° C. (68° F.), as the example of carbon bisulphide teaches, may be used with excellent results at somewhat higher temperatures. In this direction, then, is a field open which will well reward experimental activity, and which all the more deserves attention because exact experiments are wanting with all but a very few of the greater number of disinfectants and these have been shown to be practically useful only under certain conditions."*

In 1889, Professor Scalji,† of Rome, mentioned the following significant facts:

Normal urine, when maintained at a temperature of 45° C. (113° F), undergoes fermentation as readily as when left at a temperature of from 15° to 25° (59° to 77° F.). If 5 centigrams of corrosive sublimate are added to one litre of urine, making a solution of 1: 20,000, the urine putrefies at the end of several days if left at ordinary temperatures; but it is preserved a month or more without a trace of fermentation if its temperature is maintained at 40° (104° F.). At this temperature of

*Mittheilungen aus dem Kais. Gesundheitsmate, 1,249, 1881.

†Bulletin Medical—Revue D'Hygiene, XII, 82 1890.

40° the antiseptic action is assured with a dose of only 1:100,000 of the sublimate.

Furthermore, Professor Scalji states, that when urine which contains 1:100,000 of sublimate is kept at the temperature of 40° several days, and then allowed to remain at ordinary temperatures (15° to 20° C.), no trace of fermentation appears.

Behring* refers to the fact, which has been confirmed by various observers, that a 5 per cent. solution of carbolic acid at ordinary room temperature will not, even after many days, destroy anthrax spores with certainty, but he shows that, when the temperature of the solution is raised to 37.5 C. (99.5 F.), their destruction is complete in three hours.

Caustic solutions of alkalies are more or less rapidly germicidal according to their strength, but Behring learned that the alkaline carbonates may become very energetic disinfectants when used at higher than ordinary temperatures. After working with strong solutions of soda and of alkaline soaps, and finding that they, at degrees of temperature above 70° and 80° (158° and 176° F.), were rapidly effective, made a solution of washing soda about as it is used in laundries, and containing about 1.4 per cent. of soda. This solution at 80°—83° C. (176°—181.4° F.) destroyed anthrax spores in ten minutes, and at 75° C. (167° F.), in twenty minutes.

He confesses that these results with warm and hot solutions of washing soda surprised him, particularly as he had, through special control experiments, assured himself of the high powers of resistance which his anthrax spores possessed.

But, so far as I know, Heider* has marked out more fully than any one else in the influence which moderately increased temperature has upon the action of disinfecting solutions. Among the results of his investigations we may note the following, in which anthrax spores served as the test, and the number of minutes, hours, or days given, being the time required to sterilize them.

Carbolic acid, 5 per cent. solution, at ordinary room temperature, not destroyed in from thirty to forty days; at 40° C. (104° F.), four hours; at 55° C. (131° F.) from three fourths to two hours; at 75° C. (167° F.), from three to fifteen minutes.

*Zeitschrift für Hygiene, IX, 395. 1890.

*Archiv für Hygiene, XV, 341. 1892.

Pure carbolic acid and sulphuric acid, equal parts of each by weight, 5 per cent. solution, at 40° , in two hours; at 55° , in thirty minutes; at 75° , in one minute.

Pure cresol and sulphuric acid, equal parts of each, 5 per cent. solution, at 40° , in one hour; at 55° , in five minutes.

Lysol, 5 per cent. at 60° C. (140° F.), sterilization not effected in two hours; at 80° (176° F.), sterilization complete in five minutes.

Sulphuric acid, 1 per cent., at ordinary temperature, sterilization not effected in seven hours; at 75° C., sterilization in seventy minutes.

Caustic potash, 5 per cent. solution, at temperature of room, failed to sterilize in eight to ten hours; at 55° , spores destroyed in three-fourths to two hours; at 75° , in two to ten minutes.

Hot water, at 70° (158 F.), in eight to nine hours; at 85° (185° F.), in forty to forty-five minutes; at 95° (203° F.), in fifteen minutes.

Sporeless bacteria, of course, succumb much more readily to the germicidal powers of disinfectants. With *staphylococcus pyogenes aureus* as a test, sterilization was complete at the temperature of 60° (140° F.), with carbolic acid, 1 per cent., in five minutes; with carbolic acid and sulphuric acid, 1 per cent., in one minute; with caustic potash, 1 per cent., three minutes; with lysol, one-half per cent., three minutes.

Several explanations of the reason why warm solutions of disinfectants show a more energetic germicidal action than cold solutions, suggest themselves. One is the well-known fact that the intensity of chemical action increases with increasing temperature; another is that moderately elevated temperature favors the functional activity of bacterial life and therefore the rapidity with which poisons are absorbed. But when we have to do with sporeless bacteria, and that is the case in nearly all of the real work of disinfection, we have the direct co-operation of moist heat in destroying its vitality, even when the increase in temperature is hardly more than moderate.

Practical applications of the results of these investigations readily occur. In the first place, they suggest a grave doubt as to the efficacy of some processes of disinfection and antisepsis as they may be carried out during the cold season. Next, they teach the great advantage of using antiseptic and disinfecting solutions warm or even hot.

In the disinfection of material containing the bacillus of tuberculosis, we have to do with an infection hard to destroy, but about whose

powers of resistance, whether against chemical disinfectants or heat, investigators differ. Schill and Fischer* state that twenty-four hours are required for a 5 per cent. solution of carbolic acid to disinfect tuberculosis sputum. But the disinfection may be more rapidly and certainly accomplished if the carbolic solution for the disinfection of clothing be heated, or if the spittoon containing tuberculosis sputum and disinfecting solution be filled with hot water and set aside to cool before it is emptied. Warm or hot solutions may therefore be used for the purpose of increasing the intensity of action of some of the disinfectants, thus extending the range of their applicability.

When the articles to be disinfected can be subjected to the action of the solution for only a short time, as in washing floors or other wood-work, wiping down walls, or rubbing articles of leather or upholstered furniture which cannot be disinfected otherwise, rapidity and certainty of action should be increased by increasing the temperature of the disinfecting solution.

In clinical disinfection and antisepsis, it is an advantage to use the solutions as warm as practicable. It will sometimes enable us to diminish the strength of our solutions and thus minimize the danger of toxicity, without loss of disinfecting effect. In the dressing of wounds, and as intra-pleural and intrauterine injections Professor Scalji says that he has used with excellent results very dilute but very warm, bichloride solutions (40° — 45° C.= 104° — 113° F.).

Another point of advantage in the use of warm disinfecting solutions is made by Nocht. In the use of the so-called 100 per cent. carbolic acid, its slight solubility in water is a hindrance. Mixed with water in the proportion of 5:100 a large portion of it remains undissolved. Clothing immersed in the mixture is permanently spotted and injured, for the reason that the fabric readily absorbs the insoluble part as well as the watery solution, and so is, in places, subjected to the action of the undiluted agent. If, however, to a hot solution of soap and water, the carbolic acid is added, and the mixture stirred, a clear solution is formed. Three per cent. of soap in water at 60° (140° F.) will render 6 per cent. of carbolic acid soluble. The appearance of fabrics soaked in this solution is much better than if subjected to the simple watery solution. The germicidal action of the solution is not

*Mittheilungen aus dem Kais. Gesundheitsamte II, 142. 1884.

increased by the presence of the soap, but heightened temperature makes it distinctly more effective. At 50° (122 F.) a 5 per cent. solution with soap destroyed anthrax spores in six hours.

DIET AND DYSPEPSIA.

By W. E. ANTHONY, M. D., Providence, R. I.

A healthy condition of the digestive organs is not always assurance of good digestion. Perfect digestion is dependent to a great extent upon mental conditions. Good humor, quietness of mind, freedom from worry are important factors. Melancholy is a near kin to dyspepsia; and as a sudden knock down blow on the stomach may be instantly fatal, so a number of petty blows dealt to it in the way of bad or improperly prepared food, will shorten life and make its duration uncomfortable.

In the consideration of the subject of diet, a question which meets us at the outset is, which is the more harmful, to eat too much or too little? Which is preferable, abstinence or satiety? It is easy to say keep a middle course, but this is not always readily defined.

When the nutrition of the body is carried on in a normal manner there exists a certain definite ratio between repair and waste. In an ideal dietary the amount of force generated should be sufficient to maintain this ratio at a normal standard.

The natural diet of man is a mixture of animal and vegetable products with one mineral—salt.

The ultimate use of food is to construct tissues or repair them when destroyed by wear, and to furnish force necessary to the body, muscular, nervous, secretory, etc. Flesh, blood and bone need for their construction the phosphates derived from both animal and vegetable life.

Too exclusive an animal diet renders persons subject to inflammatory attacks, and too exclusively a vegetable diet reduces the strength. Climate modifies this to a considerable extent. Instinct teaches the natives of very hot or very cold countries to adapt their diet to the climatic conditions. Those living in warm dry countries thrive on a vegetable diet which would not sustain life in a very cold climate. The

coarse, fatty diet of the inhabitants of Northern Greenland and Lapland could not be used by the Hindoo or African.

All the varieties of animal food may be eaten by persons who have perfect digestion. This class, however, especially in cities, is in a minority. It is, therefore, a matter of interest to indicate the precedence in value of the digestibility of various kinds of flesh foods.

Beef and mutton are easier digested than veal and lamb, a circumstance which is dependent partly on natural causes, and in part on the custom of whitening the flesh of younger animals by repeated bleedings, which changes the muscular fibres of the meat. A weak or delicate stomach will digest mutton better than beef, while a robust person will derive more nourishment from beef than mutton.

Pork in its various forms, ham and sausage, is not easily digested. Of poultry, turkeys and chickens, are excellent foods. Geese and ducks are not suitable for weak stomachs. Most of the foods generally classed under the head of game are easy of digestion.

Fish forms an agreeable variety of diet, but a poor staple food. It is less stimulating than meat and may be substituted for it once or twice a week. Shell fish are generally easily digested, but in some persons they produce an eruption of the skin, which causes an intolerable itching and with it, sometimes, severe constitutional disturbance.

A diet composed of milk with the addition of bread or other farinaceous food is one which is of value for persons of advanced age, whose digestive organs partake of the general debility experienced at that time of life. Also in young children and convalescents from disease. Bread made from gluten flour is much preferable to that ordinarily used since it contains certain portions of the grain which are discarded in the usual manner of grinding the wheat.

Vegetables are, for the most part, easy of digestion, and some of them possess marked medicinal qualities. Spinach and asparagus have a direct effect upon the kidneys. The common dandelion used as greens has an action upon the liver, as also do tomatoes when eaten raw.

Dyspepsia is so common in this country that it may justly be called the national disease. At least one in every four or five persons suffers from it in some of its forms. The terms dyspepsia and indigestion are frequently, though improperly, used synonymously. The first means, "hard to digest," while indigestion means, "impossible to

digest." In the first case an article which could not be digested in two or three hours might be in seven or eight, while in the latter case some articles of food might not be digested at all.

Among the causes of dyspepsia are, errors of diet, eating too much, too fast or too often, nervous conditions, worry, anxiety, grief, etc.; close mental application without sufficient muscular exercise.

The first operation in the process of digestion is mastication of the food. This serves a double purpose—divides the food into small portions so that it may be the more quickly and thoroughly acted upon by the juices of the stomach, and, by the secretion and admixture of saliva with the food, moisten it so that it may easily be swallowed. It also changes the character of it, by chemical action, converting the starchy constituents into sugar. Persons who have poor teeth, or none at all, are dyspeptic from the reason that the first step in digestion cannot be properly performed.

The same result obtains if one eats too fast; time is not given for the requisite sub-division of the food and the admixture of saliva. Eating too much or too often will throw more work upon the digestive organs than can be accomplished well in the usual time. A certain amount of food well digested will make good blood, but if a large amount is to be digested it will be imperfectly done and the blood produced will not be pure. When it shall be taken up, through the usual channels to the heart, and being there mixed with the other blood of the body, the whole is rendered less pure. This blood being carried to every part of the body, owing to the imperfect nourishment it supplies, may cause unnatural feelings in parts remote from the stomach, where the cause of the trouble originated. This will explain sensations often ascribed to other causes by dyspeptics, such as headache, pain in the back, some forms of neuralgia. Palpitations of the heart and sensations of suffocation are often experienced. All these and other symptoms may occur without any feeling of distress in the stomach.

It is the experience of most physicians that the majority of patients who consult them for supposed heart disease are dyspeptics.

Gastric digestion may be impaired by an excess or a diminution of the gastric juices. In acid dyspepsia, the acid which gives the disorder its peculiar characteristic is usually lactic, but occasionally it is hydrochloric. The excess of lactic acid may be the result of a prolongation of the natural lactic acid stage of digestion, or it may be fur-

nished by the grape sugar developed from the sugar of the dietary. A part of it may be grape sugar resulting from the action of the saliva upon the starchy portions of food. The cause of the prolongation of the lactic acid stage of digestion is the deficiency in hydrochloric acid which ought naturally to take the place of the lactic.

In those cases where acidity is caused by a super-abundance of hydrochloric acid, the excess of acid manifests itself in two ways, (a) when the acid is poured out with a gush immediately upon the introduction of food; (b) where it accumulates in the stomach during fasting. In both cases the effect is to neutralize the alkalinity of the saliva too soon, and thus prevent the digestion of starchy food which accumulates in the stomach and becomes an encumbrance.

Dyspepsia may be caused by eating too little; not a few have dieted themselves into dyspepsia. Every part of the body derives its vigor from the food eaten, and if the stomach itself is deprived of requisite nourishment it becomes too much weakened to properly digest anything.

Dyspepsia may be caused by too close mental application. Study or mental work immediately after a hearty meal uses up the nervous energy that should go to the stomach, by appropriating it to the brain. Such work habitually continued will produce debility of the stomach, and consequent inability to convert the food into healthy blood.

There is a difference of opinion as to the effect or propriety of using water freely as a drink with meals. Some think that fluid taken in considerable quantity at that time dilutes the gastric juice and so retards digestion. When ingested with meals it is not unlikely that it may do good by washing out the digested food and exposing the undigested portions more thoroughly to the action of the digestive ferments.

The good effect of water drank freely before meals is undoubted. A glass of hot water *sipped* half an hour before eating will wash away the mucus which accumulates during the period of repose. The stomach thus cleansed is in better condition to receive food and convert it into soluble compounds.

This article is not offered as a scientific presentation of the subject of Dyspepsia and Diet, but more in the nature of a clinical talk to call attention to matters with which we are all more or less familiar, but which from the very fact of our familiarity, paradoxical as it may seem, are frequently overlooked, or not considered, when a case of impaired

digestion presents itself. The attention to diagnosis and suggestions for treatment assuming more importance in our opinion at the time; the cause being lost sight of while trying to remedy the effect.—*Charlottesville Med. Journal.*

TAKA DIASTASE.

BY FERDINAND LASCAR, PH. GR.,

Pathologist to the Demilt Dispensary, etc.

In the human system a continued waste takes place which it is necessary to provide for, and to this end man partakes of food which must contain the elements for this purpose. To bring such food products into proper form, so that they can be assimilated and taken up in the system, the digestive organs perform their functions, and these are of a mechanical and chemical order. The food needed is both animal and vegetable in nature, the latter forming by far the greater and more important part. It can truly be said that upon the proper digestion of his food, man's health, happiness, and very life depend, and progressive science has fully demonstrated the unerring truth of this. Any irregularity or fault in the process of digestion very soon becomes manifest, and dyspepsia, malnutrition, and ill health follow. As the food man partakes of is twofold, so is the process of digestion a twofold one, animal and nitrogenous foods needing an acid, while vegetable, starchy foods need an alkaline process to bring them into a soluble form ready for assimilation. The general idea about faulty digestion is that the stomach performs its duties improperly. While this, in very many instances, is undoubtedly so, the fact is, nevertheless, that in the greater number of cases of impaired digestion improperly performed processes of other organs are at the bottom of the evil in failing to properly convert the starchy food partaken of.

The changing of amylaceous food into dextrose and maltose is the beginning of digestion. All will have observed that bread, crackers, or potatoes, not being sweet in themselves, very soon become so when masticated and thoroughly mixed with the saliva in the mouth, and that their taste becomes sweeter the longer this is continued. This sweet taste is due to the conversion of the hydrated starch by the action

of the saliva upon it, the saliva containing an enzyme called ptyalin' which, by its presence, splits up the starch into soluble products which I will mention later on, and this splitting-up process of the starchy food even continues after it has left the stomach. Animal foods needing the acids which are found in the stomach are digested there, but acids materially interfere with the action of enzymes which cause the conversion of starch, even destroying such action altogether. For this reason it seems practically incorrect to say that the conversion of starch continues after it leaves the mouth; but nature has provided against a too soon interference of acids, because it is now well understood that acid, especially hydrochloric acid, is secreted in the stomach a considerable time after the food has arrived there, and this may be one of the reasons why the converting of starch continues after it has left the mouth.

Since medical science has thoroughly grasped the philosophy of digestion, it has been the aim by artificial means to supply the enzymes which digestion calls for when they do not appear to be present in a sufficient quantity or are secreted in less potent form by the digestive organs. Science has succeeded fairly well in supplying gastric and pancreatic ferments when nature lags behind; but our success has so far been only a very partial one in supplying starch-converting substances, and for this reason a new and seemingly valuable discovery in this direction at once becomes interesting.

That diastase has an identical action with ptyalin upon starch is a fact long known, and for this reason the diastase contained in malt has been employed for this purpose. Diastase is contained to a lesser or greater extent in the different extracts of malt, and in minute quantities also in fermented malt preparations. In the latter the diastatic action, however, is generally totally destroyed by the acids present. Even in the best extracts of malt there is only a limited and variable amount of diastase present; and while the extract of malt will continue to play an important role as a dietetic agent, its utility as a starch-converting agent will always remain a limited one. From time to time pure diastase has been offered to the profession, but none has so far proved of a sufficient potency to recommend itself to general use. Great progress in this direction is the discovery of Mr. Takamine, a chemist of no mean ability, who acted as one of the commissioners of Japan at the Cotton Exhibition in New Orleans several years ago. At that time he showed

me an extract of malt, as manufactured in Japan, very rich in diastase and nutritive properties, and which I have mentioned in a paper on the diastatic and nutritive properties of malt extracts, published in the December number, 1891, of the *Epitome of Medicine*. In that paper I warned against too great heat in the manufacture of malt extracts, as heat impairs, and is even liable to totally destroy, the diastatic action. The avoiding of all undue heat in preparing diastase may be one of the reasons why the diastase which is now manufactured by Parke, Davis & Co., under Mr. Takamine's discoveries, is so perfect in its action in converting starch into maltose and dextrose. His product is a dry powder similar in appearance to some I received from a reputable German firm years ago, but is vastly superior in potency. Since the receipt of this German preparation I have frequently had occasion to experiment with various diastases, some being named vegetable ptyalin, but in no instance have they come up to the desired standard, and failed to fill the void felt for an enzyme which will accomplish what the enzyme of saliva in a healthy individual does accomplish.

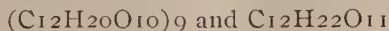
In comparing notes of experiments lately conducted with taka diastase, other available diastases, and different extracts of malt, I find that the claim of the taka diastase that it will convert a hundred times its own weight of starch into a soluble state is well authenticated, for I have succeeded in converting even fifty per cent. more of starch than is claimed for it. Another point in favor of taka diastase above other similar products is the quickness of its action upon starch, for the action is almost instantaneous. To convert one hundred parts of starch into a soluble state by the action of one part of taka diastase; under proper conditions, it takes only four minutes until neither iodine test nor the microscope can detect unconverted starch. The product of converted starch with Mr. Takamine's taka diastase is to a great extent maltose.

Compared with the time required by the best extract of malt to convert starch, this is certainly an excellent showing, for it took the best malt extract between seven and eight minutes to convert its own weight of starch into a soluble state, while with some other extracts of malt it took fifteen, twenty, and thirty minutes to partially accomplish this end. Tests with Fehling's solution to ascertain in the converted starch products the amount of contained sugar therein were equally favorable to taka diastase.

In converting starch into a soluble state by the action of diastase,

the rearranging of the molecules of starch is understood is to be as follows :

Starch ($C_{12}H_{20}O_{10}$) 10 plus water, H_2O , are first formed into erythro dextrose and maltose.



By the continued action of diastase further hydration of the erythro-dextrose takes place.

The erythro-dextrose further splits up into erythro-dextrous-B and maltose, the ultimate result being a small amount of dextrin (ancho-dextrose) and eight or nine equivalents of maltose. Since Leuch's discovery of the specific starch-converting property of saliva and its ptyaline, we have lacked an agent of sufficient potency to accomplish what good healthy saliva does, and, for the first time, we find in taka diastase a substitute of undoubted worth, which, even in the presence of a minute quantity of acid, does not cease to be potent. The ptyaline in saliva is present there in a neutral or weak alkaline state, and for this reason it suggests itself that diastase, being an analogue with the former, acts also at its best in such a state, and is incompatible with acids. I employed in the greater number of my experiments with diastase carefully washed arrow-root,—a perfectly bland and neutral starch; but I found that starches giving a slight acid reaction on blue litmus were equally well converted by taka diastase. In testing diastase as to its potency, I would recommend that the iodine as well as the copper tests be employed, and that undue employment of heat under all circumstances should be guarded against, as heat, as already mentioned, destroys the action of diastase.

Taka diastase being a dry powder, tasteless and of no perceptible odor, can be given in very small bulk, and for this reason I think it will prove itself of value in infant feeding, where it is desirable to give starch-containing foods, provided said food would easily dissolve and the infant's saliva could be relied upon to perform that function. That the new diastase is destined to become a favorite with the profession I have no doubt, having acquainted myself with its potency in converting starch in a minimum of time into a form ready for absorption by the system, and I think it will be found the very remedy for which we have waited so long.—*From the Therapeutic Gazette.*

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EDITORIALS.

HORSE MEAT VERSUS BEEF.

There has been a new industry recently brought to the notice of the American people which we fear will be productive of several complications. This industry is the killing of old worn-out horses and selling their flesh as an article of food. In itself the selling of horse meat does not constitute a breach of the law, but when it is fraudulently passed off on the innocent public, there is time for action.

The advocates for horse meat as a food, claim that it is equal to beef in every way, but we do not believe it. In the first place, for centuries horses have been pampered and cared for, until they are as liable to disease, and almost as many kinds, as any member of the human family. Cattle are left more to themselves, and natural forces produce condition in their bodies to withstand their surroundings.

In the second place the lives of horses are such that they are subjected to greater physical strain. Their blood is often heated and consequently a corresponding change takes place in their muscles and tissues. Cattle expend little energy and so their muscles are not constantly striving to regain new force. There are fewer chemical changes and less acids in the tissues of their bodies.

In the third place, only those horses are killed that are unfit for other use. This is openly admitted, and this fact alone ought to settle the matter. Is it probable that these horses which have become worn out and unfit for service, are likely to be perfectly healthy? And is their flesh from the standpoint of physiological chemistry fit for us to take into our bodies and assimilate?

We do not think so, and no sensible person will be likely to counsel the substitution of horse meat for beef.

Aside from pathological conditions which are liable to exist, there will be found a great lack of those substances necessary to produce vitality in the human body.

This thing will be allowed to go so far and then it will be stopped, but in the meantime it will be interesting to watch how large this industry will grow.

EXERCISE FOR SCHOOL CHILDREN.

This subject is worthy of notice, for in a short time the opportunity for out-door exercise will be gone.

Many children are unable to engage profitably in school work because of physical unfitness. That this is so is not always apparent, but the physician's eye can generally detect the want of judicious exercise. The cramped chest, the dull eye and general lack of color are never failing symptoms.

Therefore let the teacher and parent look well to remedying these conditions.

There are many ways for so doing but a short article on the above subject will give some simple rules as a general guide.

MEDICAL ABSTRACTS.

THE EFFECT OF ETHER ON THE KIDNEYS.—In the *University Med. Mag.*, there is an article by Dr. George B. Wood, entitled "The Elimination of Ether and Its Relation to the Kidney," a thesis for which the Isaac Ott prize of the University of Pennsylvania for 1894 was awarded. The author gives accounts of seventeen experiments on animals, undertaken for the purpose of ascertaining the precise action of ether, when administered as an anæsthetic, on the kidneys, whether healthy or diseased. He thus summarizes the chief conclusions that he has arrived at: 1. It has been proved that ether exists as such in the free state in the blood, but, although it must come in close relation with the kidney, it is not excreted by that organ to any appreciable extent. Nevertheless it has been demonstrated that in ether anæsthesia the kidney becomes congested, and, on microscopical examination the cells show cloudy swelling. The cells of the convoluted tubules are affected primarily, and the tufts and collecting tubules do not show any change unless the anæsthesia has been prolonged. It is probable that repeated administrations of ether, if kept up long enough, would cause desquamation of the epithelial cells. 2. The local effect of ether upon the kidney already diseased must be very deleterious, for an, unhealthy organ will not stand wear and tear like a normal one. In cases where uræmic poisoning was beginning to manifest itself it was shown that there was a liability to sudden death during ether anæsthesia, due to the action of the ether on the already depressed centers of respiration.

The author gives it as his belief that in cases of nephritis surgeons should give ether only with the greatest care, and watch continually for any signs of failure of respiration. An important point, he says, is that ether should be given very gradually, and when during the anæsthetization it is necessary to use more ether, the inhaler should not be put directly on the face at once, but gradually brought close to it while the anæsthetizer watches the patient's breathing carefully.—*Northwestern Lancet*.

THE TREATMENT OF PLEURAL EFFUSION.—Segalea (*La Medicine Moderne*) has employed with success topical applications of guaiacol in the following formula:

R Guaiacol, *m xxxvj*.
Glycerine,
Tinct. of iodine, aa fl dr. ss.

The applications are made by means of a brush to the entire posterior aspect of the chest, which is then covered with cotton and an impermeable dressing and a bandage.

In case of anasarca, with anuria, in the sequence of scarlatina, in which other measures had failed, applications of the following combination were soon followed by relief:

R Guaiacol, *m xvj*.
Glycerine, fl oz. ss.

—*Medical News*.

WHEN MAY GONORRHEICS MARRY?—Lowenhardt (*Journal des Connaissances Medicales*) gives rules for the guidance of physicians consulted by blenorrhagics to gain consent to marry, says the *Virginia Medical Monthly*. As the virulence of the urethral secretion depends upon the presence of gonococci, the candidate for marriage should be subjected to repeated bacteriological examinations, carried out separately on the secretion of the anterior and of the posterior urethra. A slight secretion is not sufficient for this purpose, but the urethral mucosa must be irritated in such a manner as to place it in analogous condition (excess in *baccho of venere*) to those which light up an indolent case. The best means to obtain this result is to inject a few drops of a one-fifth per cent. solution of silver nitrate. If then the secretion contains 100,000 cocci, but is strictly made up of epithelial cells marriage can be permitted. The presence of numerous pus corpuscles necessitates renewed examinations and treatment of this pseudo-gonorrhea. Lowenhardt insists upon the fact that the gonococcus is alone responsible for the virulence of the exudate and the serious results that follow inoculation with it in the genital apparatus of women.

This is a question of great moment and should receive very careful attention. I do not think that marriage should be allowed as long as there is any urethral discharge whatever, or as long as clap-flocks appear in the urine. The gonococci are perfectly capable of burrowing into the urethral gland and lacunæ and remaining there indefinitely, being always a source of danger and menace.

I do not believe with Lawson Tait that gonorrhea is never cured, nor with Noeggerath as to the frequency of gonorrhea in women, because clinical experience does not coincide with their views; but it is undoubtedly the fact that chronic gonococcus-bearing urethritis is extremely stubborn and persistent and difficult to cure, and is capable of being transmitted to women and causing most serious complications long after an apparent cure. The following is an illustrative case:

J. B., contracted gonorrhea in the fall of 1892. Discharge lasted for six weeks and then almost ceased. Drank champagne during Christmas holidays, and the discharge reappeared; continued for several months and then became scarcely more than a slight secretion, *goutte millitaire*. This kept up, sometimes slightly worse, sometimes disappearing altogether for eighteen months, when he married. Two months after marriage his wife had an attack of acute ovaritis and pelvic peritonitis, and came near losing her life, and did finally lose ovaries. This man's urethral secretion was examined by me and found to contain gonococci in large numbers.

This case is one among thousands.

The gonococci are not difficult to demonstrate. A small quantity of the pus is smeared on a slide, or the lips of the meatus are separated and a slide pressed against them. The pus is spread out in a very thin film, dried over an alcohol lamp, and a few drops of a methyl blue solution dropped on from the point of a glass rod. The slide is then washed with water and the specimen mounted in glycerine and examined with the oil-immersion. The gonococci are distinguished from the normal urethral micro-organisms by their coffee-bean shape and by the fact that they are not often single, very generally diplococci.

It is in the highest degree advisable that a microscopic examination—not one but many—be made of all cases and all grades of secretion before a cure is announced.—*St. Louis Medical Journal*.

TREATMENT OF TAPEWORM.—Dr. Leslie Ogilvie (N. Y. Polyclin., 1895, V, p. 179)—The writer refers to the frequency with which the parasite is treated without success, as evidenced by the reappearance of the proglottides in the evacuations after the lapse of three or four months. He thinks it is not a question of the particular drug to be used, but of the method of using it, and considers the directions as ordinarily given in textbooks very defective. As an antecedent purgative he prefers magnesium sulphate with jalap, which he repeats several times before he administers the vermifuge. The latter is given in two doses of 1 dram (4 gme.) each, at intervals of an hour. Two hours after the last dose he clears out the bowels again with a dose of castor oil and tincture of jalap.

In this way he thinks he secures the most powerful effect on the worm with the least effect on the patient. He claims to have been successful in the complete removal of the parasite in thirteen consecutive cases. He considers it of importance to prepare the patient for a few days previously by dieting, and recommends the physician always to pay a visit to the patient shortly after the second dose of vermifuge, and to inspect, himself, all the evacuations, which for convenience he directs to be passed into a weak solution of potassium permanganate.—*Medico-Surg. Bulletin*.

POTT'S PARALYSIS.—J. H. Huddleston (New York Med. Jour., 1895, LXII, No. 6).—In this study of 138 cases of Pott's disease, the writer finds that the paralysis, though usually a paraplegia, may be monoplegia, hemiplegia, or brachial paraplegia, and may extend and involve both legs. If the disease is acute and the paralysis comes on early, the prognosis is more grave than if the case were a more chronic one. The paralysis occurred, as a rule, within a year after the onset of the disease. It lasted from seven weeks to four years. Treatment should be recumbent position and evacuation of abscesses. Spinal support is very important.

A NEW METHOD OF ARTIFICIAL RESPIRATION is described by Dr. Berthold Beer in the *Wiener medicinische Blatter*. The mucous membrane of the lips and of the mouth is rubbed slowly with a piece of ice, the rhythm of the motion corresponding as much as possible to that of normal respiration. In the cases observed by Dr. Beer the result was a return of respiration, very strong at first, but, with the continued application of the ice, becoming very regular, quiet and deep. The ice used in this way is said to have, moreover, a general sedative effect, and the author has employed this quieting action with success in the treatment of cerebral troubles. Dr. Foges of Vienna, has obtained equally favorable results with this treatment in two cases of asphyxia. In all cases it is a method that may be employed for several hours at a time, as it is harmless for the patient and easy for the physician.—*Exc.*

AN IMPORTANT MODIFICATION OF THE PROCESS OF SECURING GENERAL ANESTHESIA.—Rosenberg, of Germany, has made an improvement in the process of anesthetizing a patient that obviates many of the inconveniences, discomforts and dangers of anesthesia. As is well known, the anesthetic vapors are very irritating to the superficial nerves of the mucous membrane of the respiratory tract. On this account reflex accidents are liable to occur, most likely to affect the heart, especially in the early stage, and also in the awakening stage, of chloroforming.

Dr. Rosenberg overcomes that danger by first spraying the nasal passages with a ten per cent. solution of cocaine, repeating the spraying every thirty minutes if the anesthesia is prolonged, and repeating it at the close of the anesthesia, however short the period may be. He administers the chloroform by the "drop by drop" method. In addition to the specific effect upon the nerves, cocaine is antitoxic to chloroform. Thus, by successive steps, the improvements in anesthesia are reducing the dangers of that condition until it seems to be safer to undergo anesthesia than to get aboard a railroad train. The administration of heart tonics before the operation, spraying the nostrils with cocaine, the administration of the anesthetic by the drop by drop method, all reduce the probability of accident. In case accident should occur, forcible dilatation of the rectum, regular traction upon the tongue, and stimulating the heart by rapid, forcible pressures of the hand over the region of the heart, offer a pleasing promise of resuscitation.—*Med. World.*

NEWS NOTES AND FORMULA.

POTASSIUM IODIDE.—Large doses of potassium iodide, against which so many patients rebel, can be readily administered, and are easily borne, if diluted by soda water instead of unmedicated water. A patient now under Dr. Hansell's treatment for acute iritis of the left eye, complicated with acute optic neuritis of the right eye, complained of disgust and nausea whenever she attempted to take twenty drops of the saturated solution of potassium iodide, even when largely diluted. Syphon soda water being substituted as a menstruum, the dose was increased to two hundred drops daily, with perfect satisfaction.—*Phil. Poly-clinic*.

ALOPECIA.—

R Ext. jaborandi fl.
Tinct. cantharidis fl aa oz. ss.
Glycerine.
Ol vaselini aa oz. j.

M Sig. Apply locally with a sponge at night.—*Bartholow*.

LENGTH OF INTESTINAL CANAL.—Dr. Dreike, of Moscow (Vratch, No. 37, 1894. p. 1026), has measured the length of the intestinal canal in 104 infantile and 65 adult dead bodies, and arrived at the following conclusions, says an exchange :

1. In children the sex does not show any influence on the length of the intestinal tube. As to adults, in men the tube proves to be relatively longer than in women.
 2. Children have a relatively longer intestinal canal than adults.
 3. The relative length of the large bowel in adults surpasses that in children.
 4. Pathological changes in the intestines in children may produce a considerable increase in the length of the tube.
 5. Subjects dying from phthisis and exhaustion present a relatively short intestinal tube.
 6. Nationality does not seem to have any influence on the length of the canal.
-

STYE.—A solution of fifteen grains of boracic acid to the ounce of water, applied three times a day with a camel's hair brush, is said to be very efficacious in styne.

IN alcoholic subjects, Bromidia, of all soporifics, is least hard upon the heart.

IF a pregnant woman be exposed to the fumes of mercury, abortion will ensue.

DILUTE nitric acid is highly recommended in the treatment of whooping-cough.

A FEW drops of chloroform on a handkerchief applied over the seat of pain, will effect prompt relief.

A GLASS of hot milk, repeated every twenty or thirty minutes, will give surprising results in uterine inertia.

REMEMBER it requires less quinine to cinchonize a patient after the liver has been aroused than when that organ is inert.

THREE days before administering chloroform give compound rhubarb powder and diet carefully. There will be no nausea.

ASCITES.— R Hydrarg. Chlor. Mitis, 6 grains.
Pulv. Digitalis, 6 grains.
Pulv. Scillæ, 6 grains.
M. Div. into pil. No. 6, Sig.: One three times daily.

THE treatment of chordee will always be assisted by emptying the bowels.

HEPATIC AND NEPHRITIC COLIC.—

R Valerianate of Amyl, 3 drops.
Sulphuric Ether, 3 drops.

M. For one capsule. Let twenty such capsules be made. Sig.: Two capsules every half hour until six have been taken.—*La Medecine Moderne*.

TETANUS.— R Bromidia, $\frac{1}{2}$ ounce.
Papine, $\frac{1}{2}$ drachm.
Tinct. Veratri Vir. (Norwood) 2 drachms.
Aquæ Camphoræ, $17\frac{1}{2}$ drachms.

M. Sig.: A teaspoonful every hour.

Dr. J. B. Wheeler, Adjunct Professor of Surgery in the University of Vermont Medical Department, has returned from the Adirondacks.

Dr. Frank Parsons Norbury who recently removed to St. Louis to assume the editorial management of the *Medical Fortnightly*, has been elected to the chair of Practice of Medicine and Clinical Medicine in the St. Louis College of Physicians and Surgeons.

Glycozone will cure gastric ulcer.

In obstinate epistaxis, give atropia.

RATIO OF THE CAUSES OF DEATH.—Cause of death, says the *Texas Health Journal*, according to the census of 1890, will be as follows: Of 10,000 deaths in the United States, one will be from calculus 35 due to Bright's disease, 40 to fevers other than typhoid, 59 to rheumatism, 7 to scrofula, 130 to cancer, 140 to apoplexy, 148 to whooping cough, 160 to dysentery, 190 to meningitis, 220 to scarlatina, 240 to ague, 250 to convulsions, 310 to typhoid fever, 350 to heart trouble, 480 to diphtheria, 880 to diarrhoea and 1,420 to phthisis.

BOOK REVIEWS.

Exercise and Food for Pulmonary Invalids. By Charles Denison, A. M., M. D., Denver, Col. Denver: The Chain & Hardy Co. Price 35 cents.

Dr. Denison has certainly provided a very useful and instructive book for both the pulmonary invalid and the attending physician. It is an eminently practical work and one that should grow in popular favor as its worth is appreciated.

We are sure that it will achieve a deserved success for aside from its evident value, its low price will commend it to those who need it most.

PAMPHLETS RECEIVED.

Imperforation of the Rectum, by Geo. B. Johnson, M. D., Richmond, Va., and An Article on Movable Kidney, by the same author.

Credulity and Skepticism in Modern Medicine, An address by George Henry Fox, M. D., President of Medical Society of the State of New York.

The Infiltration Method of Local Anesthesia in Genito-Urinary Surgery. By Beausford Lewis, M. D., of St. Louis.

PUBLISHER'S DEPARTMENT.

In the "NEW IDEA" (published by Messrs. Frederick Stearns & Co., Detroit, Mich.) of April 1881, mention was made of Kola, with a brief description of its physical characteristics, habitat, and therapeutic action. In subsequent issues at different dates, the drug was more thoroughly described. Messrs. Frederick Stearns & Co., soon after their first notice put on the market a fluid extract of the drug which contained all the active medicinal principles of the Kola nut itself. Kola in the form of fluid extract, though used to some extent, has never been popular, owing to its acrid bitter taste, which renders it unpalatable, therefore, in order to devise a more palatable preparation, a series of experiments were undertaken to prepare a compound which should contain, unimpaired, the medicinal properties of the Kola nut, yet free from its acrid bitter taste. That they were successful in their investigations is self-evident in their new product "Stearns' Kola Cordial," which, although a very recent production, is already meeting with prompt recognition by the medical profession. Stearns' Kola Cordial is one-fourth the strength of the fluid extract and is very palatable, being of a pleasant taste and still retaining the characteristic odor of the drug. The preparation has been tested clinically in various hospitals, and in the private practice of many prominent physicians with uniformly good results. It contains the invigorating properties of Caffeine, with the stimulating effects of Theobromine and Kolanine. This latter principle is said by some investigators to be superior to Coca as a stimulant without the enslaving properties of the latter drug.

Messrs. Frederick Stearns & Co., have been for some time actively engaged in preparing a complete and exhaustive monograph on the subject of Kola, which is now completed, and will be mailed on request to all physicians who are interested. They will also be pleased to forward liberal samples of their Kola Cordial, and where physicians are willing to assume express charges, will send an original full size package, a quantity sufficient for several clinical tests.

The "Willard Nervine Home" is one of the most successful institutions of the kind in the city. Its results are surprising.

Do not forget the Turkish Baths on Bank street.

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TREATMENT OF ABSCESS IN POTT'S DISEASE.

From an article by A. M. Phelps, M. D., on Spinal Supports, in New England Med. Monthly, March, 1895.

A word or two in regard to abscesses occurring in Pott's disease of the spine. The orthopædist is inclined to trust them to nature, as he does in abscesses of joints. Pus living in contact with the diseased vertebra destroys them, and what was at first a small focus of disease, in a few weeks by this macerating process becomes an extensive disease, involving frequently the entire body of the vertebra.

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The Vermont Medical Monthly



October, 1895.

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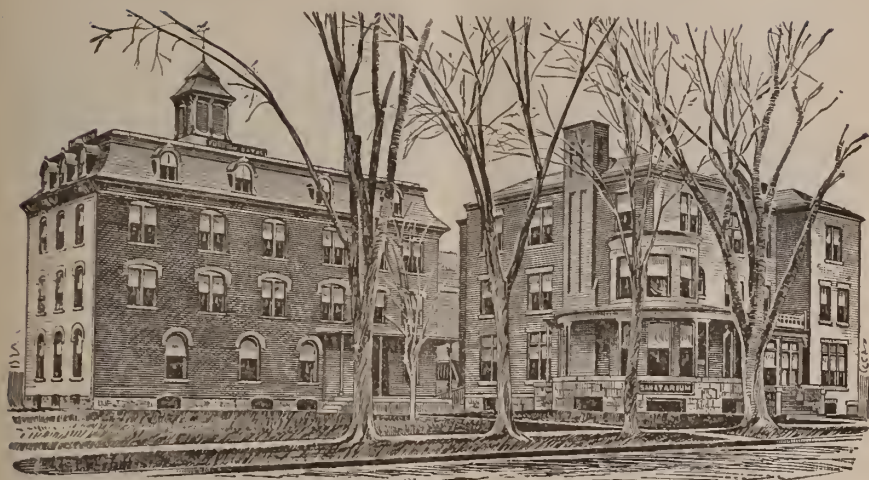
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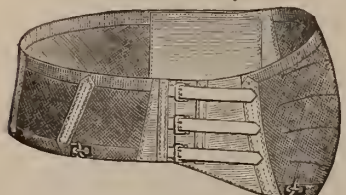
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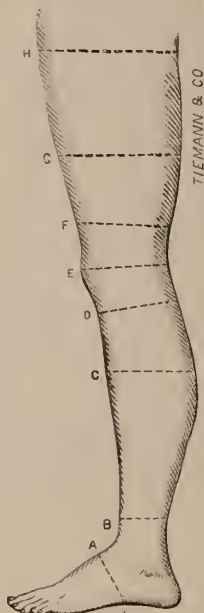
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The Vermont Medical Monthly.

*A Journal of Review, Reform and Progress in the
Medical Sciences.*

OCTOBER, 1895.

(Original Papers)

EIGHTY-SECOND ANNUAL MEETING OF THE VERMONT STATE MEDICAL SOCIETY.

This Society convened for its Eighty-Second Annual Meeting, in the County Court House in Burlington, on October 10 and 11. The total attendance was something over one hundred, this being the largest meeting in our history. Delegates were present from the Medical Societies of Maine, Massachusetts, New Hampshire, Connecticut and New York, and some of the most valuable papers presented were by some of our guests from New York, Maine and Massachusetts.

Twenty-three new members were taken into the Society.

The following officers for the ensuing year were elected :

President—Dr. C. F. Branch, Newport.

Vice-President—Dr. Lyman Rogers, Bennington.

Secretary—Dr. D. C. Hawley, Burlington.

Treasurer—Dr. D. G. Kemp, Montpelier.

Auditor—Dr. L. M. Greene, Bethel.

Executive Committee—Drs. C. F. Branch, D. C. Hawley, and A. B. Bisbee.

Publication Committee—Drs. D. C. Hawley, H. R. Watkins, and M. C. Twitchell.

License Censors—Drs. C. W. Strobell, F. F. Chaffee, and H. C. Tinkham.

Necrology Committee—Drs. C. W. Peck, D. F. Rugg, and E. M. Brown.

Anniversary Chairman—Dr. H. C. Tinkham.

DELEGATES.

U. V. M.—Dr. F. S. Gray, Troy; Dr. J. M. Allen, St. Johnsbury.
Dartmouth Med. Col.—Dr. C. S. Caverly, Rutland; Dr. Joel Allen, Burlington.

New Hampshire Med. Soc.—Dr. C. E. Chandler, Montpelier; Dr. C. F. Camp, Barre.

Maine Med. Asso.—Dr. Lyman Rogers, Bennington; Dr. H. O. Worthen, Barre.

Massachusetts Med. Soc.—Dr. J. H. Jackson, Barre; Dr. D. W. Hazelton, Springfield.

Rhode Island Med. Soc.—Dr. W. L. Havens, Chester; Dr. C. C. Smith, Gayesville.

Connecticut Med. Soc.—Dr. R. T. Johnson, West Concord; Dr. E. R. Campbell, Bellows Falls.

New York Med. Asso.—Dr. W. H. Vincent, Orwell; Dr. O. C. Baker, Brandon.

New York Med. Soc.—Dr. D. C. Hawley, Burlington; Dr. C. W. Peck, Brandon.

Northern N. Y. Med. Asso.—Dr. S. W. Paige, St. Albans; Dr. H. R. Wilder, Swanton.

White Mt. Med. Asso.—R. B. Skinner, Barton; L. W. Hubbard, Lyndon; and W. D. Huntington, Rochester.

Conn. River Valley Med. Asso.—Dr. M. R. Crain, Rutland; Dr. J. S. Richmond, Windsor.

American Med. Asso.—Drs. C. F. Branch, O. W. Sherwin, M. R. Crain, A. L. Bingham, E. W. Shipman, J. M. Hamilton, Henry Janes, E. H. Martin, R. M. Canfield, D. G. Kemp, F. R. Stoddard, F. W. Sears, H. C. Tinkham, C. W. Peck, J. H. Linsley, D. C. Hawley.

It was unanimously voted to make the VERMONT MEDICAL MONTHLY the official organ of the Society.

A detailed account of the meeting will appear in the next issue of this journal.

VICE-PRESIDENT'S ADDRESS.

CHRONIC GASTRITIS.

Read at the Eighty-Second Annual Meeting of the Vermont State Medical Society, at Burlington, October 10 and 11, 1895.

Mr. President and Gentlemen of the Vermont State Medical Society :

The general practitioner, the busy plodder in medicine, may, I believe, find his most profitable and practical field of study in his every day work. He is not and from the very nature of his work he cannot be a pioneer to explore new and unheard of realms in the domain of science. He may more safely take Sidney's maxim, "Look in thy heart and write." It is not often his to lead but to follow ; and if he but follow safely and well he need not care if he sometimes finds the path well trodden before him. It is with some such thought as this that I venture to select for my theme, what may perhaps be deemed a commonplace topic, Chronic Gastritis.

It seems to me, however, that several reasons lend much more than ordinary importance to this subject. First the very great frequency of the disorder and the fact (for I believe it to be a fact) that the disease is so often imperfectly diagnosticated. We hear far too much of the terms indigestion, chronic dyspepsia, etc., or at least too much misuse of them, employed in a sense as vague, indefinite, unscientific and conveying about as little pathological meaning as did the old use of the term "Dropsy." Second the profound effects of the disease upon the whole being of the afflicted individual, physically, mentally, morally,—mal-nutrition with its horde of resulting evils and dangers. The physical suffering entailed is fitly accompanied by a train of mental disturbances altogether forming a picture only too often seen in the victim of so called chronic dyspepsia. I have often wondered if Thomas Carlyle, that fretful, fault-finding, petulant prince of pessimists, did not draw much of his inspiration from his stomach. It is related that at the age of 23 he became afflicted with what was called

dyspepsia. What a description he himself gives of his experiences and mental suffering from gastric disorder:

"I entered my chamber and closed the door, and around me there came a trooping throng of phantoms dire, from the depths of nethermost perdition. Doubt, fear, unbelief, mockery and suffering were there and I wrestled with them in an agony of spirit. Thus it was for weeks, whether I ate I know not, whether I drank I know not, but I know that when I came forth again it was with the direful persuasion that I was the miserable owner of a diabolical arrangement called a stomach. The accursed hog dyspepsia had got me bitted, and bridled, and was ever striving to make my living, waking day a thing of ghastly night-mare."

And now gentlemen, trusting you will not deem the subject of my theme wholly unimportant and unprofitable, I will endeavor to call your attention to some of the more practical points pertaining to the subject already mentioned, viz:; chronic gastritis.

ETIOLOGY.

The causes of chronic gastritis are many. Perhaps it most frequently results from the acute or sub-acute forms, for frequently they all originate from a common cause. Whenever the normal action of the liver and spleen are interfered with or the heart's action becomes abnormal there seems to be a greater liability of this disease.

Among the conditions that predispose to chronic gastritis by an altered condition of the blood, eminent authorities place the following diseases as most active, viz: chlorosis, scrofula, anemia, typhus and typhoid fever, acute exanthemata, pregnancy, uterine diseases, diabetes, gout, and chronic affections of the kidneys. The disease not infrequently results from direct local irritation, either from irritating substances brought in contact with the gastric mucous membrane, or by toxic substances in the blood, brought in contact through the medium of the circulation. The American "quick lunch" may be mentioned as an example of the first, i. e. bolting large morsels of insufficiently masticated and insalivated food, and washing them down with half a glass of ice water, or perhaps some more objectionable fluid, thereby unduly cooling the stomach and diluting the digestive fluids to such an extent, as to render them practically inactive for a considerable time, and mak-

ing the conditions favorable for fermentation to follow. The abuse of alcohol either by direct contact, or through its action on the liver, no doubt often proves an exciting cause, but I have not found the diseases more common among "drinkers" than with the more abstemious. Other factors which deserve more than a passing notice are the swallowing of tobacco juice, putre faction from carious teeth, ulcerated gums, the prolonged use of irritating condiments (and as most condiments are more or less irritating they should nearly all come in this category), toxic substances which circulate in the blood as seen in chronic renal disease and the products of intestinal putrefaction in obstinate constipation. It will be observed from this recitation of the predisposing and exciting causes that it is usually through the indulgence, or sufferance of the patient that this disease is born.

As a noted German writer says: "Most persons treat their stomachs badly, and are neither able to resist culinary temptations, nor to take sufficient precautions at the beginning of their trouble, consequently chronic stomach catarrh is one of the best nourished and most prevalent diseases in the world. Indigestion is the remorse of a guilty stomach."

CLINICAL HISTORY.

Ewald divides the disease into two forms clinically, viz : chronic simple gastritis and chronic mucous gastritis, both of which may lead to atrophy of the mucous membrane, if left to pursue their natural course. Early in the course of the disease the symptoms of both forms are so nearly identical that the differentiation is difficult and at times even impossible without the new method of examination. Common to all are the symptoms of chronic dyspepsia, and these may continue for a long time without much variation before the characteristic symptoms of atrophy present themselves with sufficient prominence to be recognized. A constant symptom is tenderness upon pressure over the epigastrium, not extreme, but invariably present. The tongue is coated and lacks its normal moisture. The coating has nothing characteristic but varies much in its appearance from morning till night. The covering is thickest at the base and varies much in color. The tongue is enlarged and has impressions of the teeth on the sides, with frequent thrush-like spots which are usually extremely sensitive. The

breath has usually a fœtid odor. There is frequent and often profuse eructation of foul gases from the stomach, often accompanied by acrid fluid which imparts a burning sensation to the œsophagus and throat. If limited to the lower extremity cardialgia may produce urgent symptoms and may be mistaken for the more diffuse pain of gastralgia. The acidity of the regurgitated fluids is said to result, either from fermentation, in which case they contain acetic, lactic and fatty acids, or from an excess of hydrochloric acid. If these symptoms are prolonged and are not amenable to treatment, an analysis of the stomach contents is sometimes necessary, in order to ascertain whether the former or latter condition prevails, as good authorities claim the same sensation may be present, and caused by a hypersensitive condition of the mucous membrane, being irritated by normal gastric fluid. Vomiting in the early stages of the disease occurs in less than half of the cases, while slight and transient nausea is a pretty constant symptom. The appetite is capricious. Often a small amount of food produces a sensation of fullness, and belching of gas almost immediately ensues, while in others, the sensation of a stone in the stomach, begins almost with the first act of digestion, and continues for hours, or until all the food has been forced from the stomach. The production of gas usually begins as soon as the meal is completed, and continues until long after all food has been expelled into the small intestine. The excessive formation of this gas is thought to be a very important factor in the production of gastrectasis, or stomach dilatation, by paralyzing the muscular fibres. In many cases thirst is extreme, but not usually. Cold drinks frequently cause much gastric distress, and as I have noted in three cases, frontal headache would almost immediately follow the taking of a tumbler of ice water. The bowels usually retain their tone for a long time, but eventually constipation and diarrhœa alternate, and when the compensatory action of the intestines is exhausted, the food passes almost unchanged through both stomach and bowels, accompanied by a profuse discharge of watery fluid, frequently containing a large amount of mucous. Then it is that the system begins to suffer profoundly from mal-nutrition, and is particularly susceptible to invasion by other diseases. The urine is scanty and of high specific gravity and is often very irritating to the mucous membrane of the bladder, causing frequent micturition and sometimes tenesmus. The patient is disinclined to any active exercise, and suffers from exhaustion upon the

slightest effort. The mind usually keeps pace with the body, the patient eventually becoming depressed in spirit, much inclined to sleep, and seemingly never thoroughly aroused. The symptoms are intensified whenever a full meal is taken. Pharyngeal and nasal catarrh are nearly always present, the heart's action is weak, and the extremities are cold, and itching of the skin and frequently urticaria are present. Ewald describes a variety of dyspeptic asthma which is rather rare, and Rosenbach has published an article on cardiac dyspepsia, in which nearly all the symptoms are referable to the erratic action of the heart, while Trousseau described a gastric vertigo, which is quite common in cases of long standing gastritis. The patient after taking a full meal is seized with vertigo, and is frequently apprehensive of impending danger, is unwilling to be left alone, even for a minute. Usually the departure of the vertigo is followed by a severe headache. One case under my care was unable for several months to take a full meal without the occurrence of vertigo, and experiencing a sensation, which he described as similar to that following a stunning blow on top of his head. Among the later symptoms of the disease are those produced by atrophy of the mucous membrane, when instead of areas of greater or smaller size, the whole membrane becomes involved, and the compensatory action of the intestines becomes exhausted, as it must eventually be, then the effect upon the system becomes most marked, and the patient loses rapidly in weight and strength, and soon succumbs to the disease itself, or falls an easy prey to some intercurrent disease. The final symptoms of chronic gastritis bears such a striking resemblance to those of pernicious anemia, that it is held by some that the latter is not an independent disease, but the result of anemia of the stomach.

DIAGNOSIS.

Perhaps no disease offers more difficulties to the diagnostician, than chronic gastritis. An absolute diagnosis is often impossible, without a chemical examination of the stomach contents, either while fasting, or after a test breakfast. It requires not so much skill to determine that the stomach is the seat of disease, as to differentiate this disease from many other undeveloped diseases of the stomach. Of the many diseases which may simulate chronic gastritis in their symptoms, perhaps none are more apt to mislead than the neuroses.

The age of the patient will give us some evidence on this point, as nervous dyspepsia is a disease nearly always confined to the young or middle-aged. In differentiating between chronic gastritis, and carcinoma of the stomach, Ewald lays much stress on one symptom, viz: the bloody color of the stomach contents in the latter disease, due to the presence of blood pigment, which he thinks is almost invariably observed, even when hæmatemesis has not occurred; he says, however, that the diagnosis of a true gastritis, can only be reached by exclusion i. e. after ulcer, carcinoma, dilatation and the neuroses are thrown out, then the residue so to speak is gastritis. Of the chemical and microscopical examinations, the following results are accepted as indicating the different forms of this disease. In simple chronic gastritis while fasting, the stomach only contains a small quantity of watery mucous fluid, frequently tinged yellow, or yellowish green, from mixture of bile. On standing a sediment of epithelial cells, round cells, and free nuclei, remnants of food, starch granules, muscle fibrillae, and vegetable cellular tissues, is found.

After a test breakfast the acidity is variable, but never increased, hydrochloric acid lessened, pepsin and rennet small in amount. In chronic mucous gastritis there is an abundance of mucous in the stomach contents, either while fasting or after taking food, so that acetic acid always gives a marked mucin reaction.

Trial digestion (in test tube) occurs only after adding hydrochloric acid, and then is slow, curdling by rennet slow, or absent, wash water after lavage contains small, frequently bloody fragments of the epithelial mucous membrane.

When atrophy has occurred the stomach while fasting is found to be empty, and the chyme expressed after test breakfast contains neither mucous, hydrochloric acid, pepsin, nor rennet, and no tissue elements of the glandular parenchyma are to be found in a totally atrophied stomach.

Although these methods of diagnosis may seem like an innovation to the general practitioner, they are neither complicated, nor difficult, and should be resorted to whenever an accurate diagnosis cannot be reached in any other way, as the success or failure of treatment depends as much upon the accuracy of diagnosis as upon the remedies employed; what might be serviceable in the first form, would as likely prove ineffective in the third, and vice versa.

Again, the sooner a diagnosis is made out, the greater the probability of relief or cure.

Hence when such a case presents itself to us, no means within our reach should be neglected, as it may mean a complete restoration to health to our patient.

PROGNOSIS.

The prognosis depends upon the age, general condition, and moral stamina of the patient, as well as upon the form or progress of the disease. In simple chronic gastritis, or chronic mucous gastritis, when un-complicated and the patient found willing and capable of co-operating with us, a cure can be promised in a great majority of cases, but the patient must be made to understand that as much depends upon his behavior, as upon our skill.

When the case has progressed to the stage of atrophy of the mucous membrane the most that can be hoped for is relief for a longer or shorter time, depending upon the extent of the destruction of the mucous membrane, for when the case is not seen until the secretory function of the stomach is suspended, the case is a short one at best, and nothing is left for us but palliation.

TREATMENT.

In no disease has there been a greater multiplicity of remedies recommended than in the one under consideration.

And what one author relies upon as his best and surest remedy, is merely mentioned of doubtful efficacy by another of equal eminence and skill.

Ewald divides the remedies to be employed into three groups, viz: those which aim to directly replace the deficient gastric secretion, those which are to stimulate the depressed functions of the stomach, and those which are capable of counteracting the irritant substances introduced from without.

As there is always a diminished amount of hydrochloric acid in this disease, and as it plays so important a role in the process of digestion not only by its direct action, as a digestive agent, but as an antiseptic, reducing to a minimum the ever-present tendency to fermentation, it is only rational and natural that we should place it foremost among our remedies.

It should be given not too largely diluted and in full doses, each dose divided into three and given at intervals of twenty minutes, the first immediately after the completion of the meal,—the ordinary precautions for the protection of the teeth should of course be observed. The use of pepsin, so universally given on general principles in ordinary doses seems to have no good effect in the first two forms of this disease, and in larger doses the action is doubtful, but when general atrophy of the mucosa has taken place and no pepsin is present in the stomach even after the administration of hydrochloric acid, then full doses (5 to 8 grains) may be relied upon to some extent. Next to hydrochloric acid as an antiseptic I have found the salicylates—either salicylate of bismuth or salicylate of sodium.

The former is the more soothing to the mucous membrane. The latter while possessing the anti-fermentative properties of the former, has the additional power of neutralizing the lactic and fatty acids usually present. Another remedy recently introduced is dermatol, which has given very satisfactory results.

It is best given in five grain doses, repeated every two or three hours, when the secretion of mucous is abundant or when vomiting is very troublesome, both of which it usually relieves after a few days use. When these remedies have failed the administration of ten grain doses of inspissated ox gall three times a day, directly after meals, has proved of value, in two cases which recently came under my observation. Nuxvomica or strychnine are valuable agents when the muscular fibres of the stomach have lost their tone, and there is a tendency to dilatation. Their combination with hydrochloric acid makes an admirable remedy in selected cases. Since the approved apparatus for washing out the stomach has simplified the process so much, lavage has come into more general use, and with the most gratifying results. It not only increases glandular activity, but detaches and removes masses of mucous and undigested and putrified food, and frequently relieves gastric pain and distress, which have resisted the most powerful anodynes. Usually clear warm water is first introduced, followed by alkaline solutions, if much mucus is present, or antiseptic solutions if indicated, leaving a small amount in the stomach after removing the tube. The introduction and removal of the tube is said to increase peristalsis and strengthen muscular activity. While Ewald, Jaworski, and Stuart speak of

this remedy with positive assurance, other contemporary writers of eminence do not mention its use.

In atony of the stomach massage has been tried with good results. Enihorn's electrode is introduced into the stomach, which is nearly filled with water in order that the current may be more diffuse, the circuit being closed by a flat electrode over the epigastrium. Other measures directed to excite the stimulation of glandular secretion are the bitter tonics, of which quassia, gentian, columbo, and condurango, are the most active. Thompson attributes much virtue to columbo, while Ewald combined condurango with hydrochloric acid. Their *modus operandi* is not quite settled, Jaworski claiming they lessen the amount of secretion, while Marcone asserts they increase it, and third authority thinks their beneficial effect is due to their increasing peristalsis. However it is generally conceded that they have a stimulating effect on the digestion. Fowler's solution, nitrate of silver, ipecac, resorcin, and bisulphite of carbon water all have their advocates, but with me they have been disappointing, and vastly inferior to the remedies before mentioned. Remedies for the relief of symptoms, more particularly pain and flatus, are sometimes necessary, and the most valuable of these so far as my observation goes are chloral, hydrocyanic acid, cocaine, codeine, and charcoal, although the last named is condemned in the strongest terms by modern writers, as having no power to absorb gas. The administration of alkalis to allay the symptoms due to fermentation sometimes gives marked relief, but if long continued they depress the already weakened stomach and are objectionable for this reason. Active purgation is usually not well borne, but as constipation exists in a large majority of cases, it is necessary to stimulate the action of the bowels, and the old "Solomon Hypochondriacum" formula of Kliet most admirably answers this indication. It consists of pulverized rhubarb, 5 drachms, soda sulphate $2\frac{1}{2}$ drachms, soda carbonate and soda bi-carbonate of each 75 grains, and may be given in teaspoonful doses at bed time.

Aloes and cascara sagrada, both of which act on the large intestine, are at times valuable, but while the former if long continued in sufficient doses to be effective acts as an irritant, the latter loses its effect after a time, and will need to be changed for something more active. Carlsbad salt may be given in moderate doses for a short time, with the most gratifying results, but according to Jaworski if continued

for a longer time, it lessens gastric secretion, and even leads to atrophy of the glandular parenchyma.

There is no more important part of the treatment than that of regulating the diet, and as Ewald says, the regulation of the diet of a dyspeptic begins with the mouth. This part of the alimentary canal, should be put and kept in good order.

The teeth should be kept scrupulously clean, resorting to the brush after each meal.

The gums should be kept in as good condition as possible, and every abrasion should receive prompt attention, false teeth should be removed and cleaned frequently, and kept in an aseptic solution during the night, mastication and insalivation should be thorough, and not a morsel swallowed until made liquid by mixture with the saliva. Everyone's stomach is a law unto itself, and what might be entirely indigestible and positively painful for one, might be well borne by another.

As a rule with comparatively few exceptions, pastries, fat, tough or freshly slaughtered meats, shell fish, fat fowls and new bread are to be discarded, also cabbage, beets, peas, and beans, cheese, vinegar, alcohol except in rare cases, and then largely diluted, fats, oils, gravies, sweetened sauces, etc. As a substitute for meals, the peptones are very satisfactory, Mosquera's beef meal or jelly, beef peptonoids, Wyeth's beef juice, being very palatable, and easily assimilated and containing a high per cent. of nutrient principles.

Milk should be tried in every case, and is usually tolerated if not relished, either raw, cooked, hot, or cold, sweet, or sour, with lime water or peptonized. Milk evaporated to dryness, and powdered as recommended, by Ewald, and added to some of the above preparations, adds much to their nourishing qualities.

After the stomach regains its tone to some extent, the white of soft boiled eggs may be allowed, also dry toast, and if these are tolerated stewed fruits may be added, and later a rare mutton chop.

But little if any drink should be allowed with the meals, but an hour after meals a cup of warm drink will do no harm, and at times seems to stimulate digestion. The patient should be restrained from fully satisfying his appetite and the second meal should never be allowed until the stomach is entirely relieved of the first.

Moderate exercise should be insisted upon, the duration of such exercise to be governed by the patient's strength, rather than his inclination. The skin should be kept in good condition, by frequent bathing, and sufficient clothing worn to keep the extremities warm at all times. This may be supplemented by gymnastic exercises, and by friction, should this fail. In no disease will cheerful surroundings and lively company accomplish more than in this, and they should receive consideration accordingly.

OUR PROFESSION.

By W. D. HUNTINGTON, M. D., Rochester, Vt.

When Hippocrates proclaimed that however diseases may be regarded they must all be treated as subject to natural laws, he based his principles and practice on the theory of the existence of a spiritual restoring power, "*Vis medicatrix naturæ*," in the management of which the physician's art and science consisted and could only be obtained by experience. At this time, separating medicine from priestcraft, he originated the method of treatment of preserving the vital forces based upon principles which according to experience would not endanger the life of the patient. This was a period of great intellectual improvement and only needed a powerful mind to be brought to bear in this line of thought and research to inaugurate one of the most conservative of sciences. With progress so rapid the magnificent development which has been attained in all the branches of science reveals a vast amount of experimentation, observation, skill and mechanical ingenuity which has achieved results almost beyond the comprehension and knowledge of our profession of a few years ago.

Previous to the present century, knowledge of the structure of the human body was vague, while the theory of disease was known only by limited fancy, but as the great truth which established the connection of physiology, anatomy and pathology came to be recognized more fully, the morbid action better understood, the explanation of symptoms and following the rational treatment on scientific grounds, our knowledge of disease became better understood. The finger of science points steadily and the aim for a correct diagnosis should be the first duty of the physician. Many instruments have been called to our assistance, which permit of a wider application of the senses, notably the probe, thermometer, stethoscope and microscope. With our present knowledge of disease the microscope stands first among our instruments of research. Since the investigations of Koch the advance in the knowledge of the relations of bacteria to disease has progressed with marvelous rapidity,

and our treatment at present is based on a thorough understanding of internal antiseptic medication.

Bounding with no less degree of energy is the humane and wonderful progress reached in other fields of our profession. Surgery with its crude, agonizing and barbarous operations, was practised with painful apprehensions both by surgeon and patient. The artificial introduction of anæsthesia by the use of drugs, or the inhalation of vapors was a subject of great interest both historically and for its practical application for the relief of pain and suffering. There is abundant evidence to show its former application. Homer mentions the anæsthetic effect of nepenthe, a drug used by the ancients to relieve pain, to produce great exhilaration of spirits, while later, inhalations of a certain kind of hemp were used to produce intoxication, rendering the patient insensible during surgical operation. But the practice of anæsthetics had never become general, and surgeons had come to look upon them with despair, until 1846, when Dr. Morton, a dentist of Boston, successfully employed sulphuric ether to procure general anæsthesia. Owing to the researches of practical chemists and physicians of the present century, anæsthetics have come to hold a foremost place in medicine. Their discovery cannot be overpraised, and the work of the surgeon to-day is much relieved, while operations of the most delicate character are undertaken, and patients are spared an incalculable amount of suffering, and the dread of undergoing surgical operations is, in a great degree mitigated by the knowledge that they can be performed while in a state of tranquil sleep. But not alone to anaesthetics is to be ascribed the grand results achieved in modern surgery. Can we be too hearty in our praise of asepsis and antiseptics? The stage of controversy and argument has passed, and antisepsis is acknowledged by the surgical world of to-day as a true and valuable method. Clinical and bacteriological proof has been produced which proves conclusively that supuration, erysipelas and pyemia arise from pyrogenic organisms. While statistics of surgeons of the last two decades demonstrate that these septic diseases which were once so prevalent in private and hospital practice have nearly disappeared, and the treatment of fortifying tissues against the invasion of bacilli is considered the only means of successful surgery at the present time. To what cause can we attribute the brilliant results obtained in modern obstetrics? To what cause can we attribute the grand achievement in decreasing the death rate of

lying-in-hospitals? From what cause can we expect to obliterate purpural fever? From the fact that clinical experience of the last score of years has demonstrated that obstetrics has kept pace with the ever advancing steps in the different branches of our profession, by the thorough study and application of listerism.

The beacon light of chemistry penetrating deeper and deeper into therapeutical products, displacing the more crude forms by determining a more satisfactory standard of medication, by agents capable of producing greater effect, administered with exactness through skill in modern therapeutics. With all the progressive changes taking place in the medical profession, can any one disbelieve in the evolution of science? Can we not see the fallacious teachings of Hippocrates as compared with the enlightened knowledge of drugs and methods of administering, when to-day their physiological action is definitely known.

There is no subject just now which requires more earnest consideration than that of State Medicine, which by its progressiveness and relations to public health, in preventing disease and preserving health, has been a constant and influential factor in elevating the standard of professional education. And the steadily diminishing mortality is due to increased medical knowledge in regard to sanitary regulations, and the enforcement of its laws. The principles of hygiene, which embraces several branches, are becoming better understood, while the law governing health and disease are more fully recognized by the people. It has been truly said that the great principle of sanitation upon which it is necessary to insist is circulation versus stagnation.

The important practical question which confronts us to-day is, how are we to broaden and present a more feasible medical education? The progress of development is so well marked, that the great object in view is to strengthen our schools by extending their course of instruction and a thorough grading of its students. This can only be accomplished by granting scholarship privileges to the Medical Department as well as to those of the Classical, Scientific and Agricultural.

Are not the living questions of health to-day as much to be fostered and protected as the dead languages of centuries ago? Are not the scientific teachings of medicine as much to be supplied and defended as other branches of science? Are not the germ cells of humanity as much to be nourished and understood as the tilling and harvesting of cereal?

Are not the ravages of disease as much to be repulsed and disarmed as the approach of hostile armies upon our peaceful shores? Are not the beneficial influences of our institutions seen in the every day walks of life? Are not epidemics with their distressing mortality cut short and in every city and town are seen the fruits of our labors by a strict enforcement of our sanitary regulations? Grant to us the same beneficent privileges that students of other departments are receiving which will only be gained by our demanding recognition and our persistent enforcement for right and justice.

May the men of our profession in Vermont see to it that their labors of the past and the attainment of the present shall become the solid foundation upon which to build a broader and more thorough medical education.

EXERCISE FOR SCHOOL CHILDREN.

By H. EDWIN LEWIS.

This article is by no means to be taken as a dissertation on general exercise, for it is not intended as such. Instead it will only treat of certain defects which have been observed by the writer in regard to the health of school children, and some simple rules of procedure which will accomplish much to remedy existing conditions.

Physicians are constantly being approached by parents whose children are in such a state of general debility that they are unfit for study. They lack color, their complexions are cloudy, their chests are narrow and cramped, and their whole appearance is one of "Air-starvation." The parent goes on to tell about a lack of appetite, general weariness, frequent headaches, and "no ambition."

Beyond these facts, the wide-awake doctor requires little other information to lay the principal cause of these symptoms to a lack of exercise and good air. He sees that these children are not getting their share of the world's oxygen because their lungs are not doing their proper amount of work. He therefore will endeavor to increase the work of the lungs by such methods as are justified by his experience. Generally, no medicinal tonic will be needed, for nothing man can give will equal Nature's own tonic, fresh air, *in full doses*. A few days will usually suffice to show good results, and the changes which can be made in a month are sometimes miraculous. Common sense alone dictates the treatment when the symptoms are as above.

The first thing, however, to be desired is increase of lung capacity, and when we consider that *about sixty per cent. of all school children breathe incorrectly*, and therefore insufficiently, the importance of this object will be magnified. Their application to books, and too often their position in the school room tends to produce this condition of poor breathing, while in girls the mode of dress is too frequently a primary cause. Without sufficient lung capacity, there will be a woful lack of oxygen, and this means a continual state of partial asphyxia with very evident constitutional symptoms.

To increase then the necessary quantity of good air, we must enlarge the capacity of the lungs, and while there are many methods advised, the best and simplest is the direct one suggested by the power of parts of our body to "arise to the situation."

That is, by introducing a greater quantity of pure air into the lungs by forced breathing, though ill adapted as they are at first to meet the increased volume, they will gradually but surely enlarge to receive it, and before long the "demand will equal the supply."

Teachers in our schools may do much to aid the physical condition of the children under their care, and by precept and instruction show the importance of good breathing. Once or twice a day, avoiding draughts, the windows should be thrown open, and when good air is assured, three to five minutes should be given up to breathing. The scholars should stand erect, head up, and chin in; chest out and shoulders back and down. The position should be such that a line dropped from the face to the toes would just hit the chest. Then by count they should slowly inhale and exhale, averaging about ten times a minute, taking more time for the inhalation and less for the exhalation. Calisthenics or motions of the arms are not necessary, and are of little, if any value in the school room. This is so, because in the average school there is not sufficient time to do them long enough, or even correctly, and the tendency of the scholars is to look on them as a fantastic form of play. Therefore, more or less confusion will be produced, and little or no benefit result from them. The sessions of our schools are not so long that the muscles of the scholars should become very tired, and standing by their desks during the breathing exercise will afford sufficient change of position. Care should be taken at all times that no dust should be present, but especially should there be none during this breathing exercise. The reason is obvious.

In a little while it will be apparent to the teacher that the scholars do not become so restless towards the close of each session and a corresponding increase in the value of their work will be noticed. Besides, they will form the habit of good breathing, an acquirement sure to prove of inestimable value to them.

It often happens that teachers do not take up this work with their scholars and if they do not, the parents themselves with little exertion can correct the bad defects of their own children. The best times are in the morning soon after rising, and the last thing before going to bed.

The same rules should be observed in regard to ample ventilation and good air. A good erect position should be taken, and in addition to five minutes of the breathing exercises, five more should be spent in swinging the arms upward in front and then backward, making as nearly complete circles as possible. This should be done quite rapidly and energetically, just long enough to perceptibly quicken the heart beats and the breathing.

If this is done regularly morning and night, a child will show much more vitality during the waking hours and rest much better while asleep. The quality of the blood will improve, the circulation will quicken, and the result will be an entirely different child, far better fitted for mental training.

Therefore, in the process of education, let us not pass lightly over the health of those being educated. History shows that many men of letters and science have been physical wrecks through neglect of nature's simple demands. How much greater their work might have been had good health been theirs we cannot tell, but the sun always shines brighter, the world seems dearer and more beautiful, and even humanity itself comes closer to those whose bodies are free from physical infirmities.

Good lungs are what most of us lack, principally through bad breathing, and no truer words were ever uttered than those of Roberts of Boston, who says, "As a man breathes, so he lives. To half breathe is to half live."

May the children of to-day and the men and women of the future live whole lives if it be within our power to help them.

WOODSTOCK, VT.

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EDITORIALS.

With this issue the Business Department of this Journal passes into the hands of the Bailey and Fairchild Co., of New York. They will manage this branch and conduct all business on the same lines pursued in the past. By this we mean, honesty of purpose, clean advertising pages, and a ceaseless effort to make the VERMONT MEDICAL MONTHLY one of the best journals published. The object of the above change is progression, for we feel that a New York office will do much to insure progress in all directions. Although we have done our best so far, a better journal is promised with each succeeding issue.

ANNOUNCEMENT.

We take pleasure in announcing to our readers, that at the annual meeting of the Vermont State Medical Society, held in Burlington, October 10th and 11th, the VERMONT MEDICAL MONTHLY was unanimously made the official organ of the society. Each issue, beginning with October, will contain sixteen pages of the society's papers, proceedings and announcements, submitted officially by the publication committee of the society. As this last meeting was the largest attended and one of the most important in the history of the society, the value of the papers and discussions to appear will be evident to all. We sincerely believe that Vermont stands as high as her sister States in the quality of her medical men.

We take the following clipping from the Burlington *Free Press* of October 14, 1895 :

"At the Friday afternoon session of the Vermont State Medical Society meeting, Mr. H. Edwin Lewis spoke in the interest of the VERMONT MEDICAL MONTHLY, and at the close of his remarks the Monthly was made the official organ of the society. A certain amount of space is to be reserved each month for such matter as shall be decided upon by the society's publication committee.

THE VERMONT MEDICAL MONTHLY has met with decided success, and is filling an important place in New England medical progress."

MEDICAL ABSTRACTS.

THE EFFECT OF ETHER AND CHLOROFORM ON THE KIDNEYS.—Eisendrath (Deut. Zeitschr. f. Chir., XL, Nos. 5 and 6, p. 466).—After a careful clinical study, Eisendrath concludes that albuminuria which already exists is more frequently increased by ether than by chloroform, but that albuminuria is more apt to appear after the use of chloroform than of ether.—*Medico-Surg. Bull.*

PERTUSSIS.—Dr. Sidney B. Straley reports the results of the use of thymus serpyllum in pertussis. He used a tincture made from the green drug. His conclusions are :

1. Thymus serpyllum is a specific for pertussis.
 2. It acts in any stage of the disease.
 3. It also is a nerve sedative and gastric stimulant.
 4. It is necessary to use the green plant.
 5. It is perfectly harmless in doses as large as a teaspoonful of the tincture for a child of eight years.
 6. The action is fully established in twenty-four hours and completed in five days.
 7. Lastly : indications are that there will be no recurrence subsequently, at least not more often than in cases which run the full course.—*American Doctor.*
-

RHINITIS.—Rhinitis, says the *Columbus Medical Journal*, occurring in albuminuria is usually a sign that the kidney disease is far advanced and the prospect of life very bad. Patients seldom live longer than six months after the onset of rhinitis. If, therefore, there is a combination of rhinitis and albuminuria, there is no difficulty in coming to an instant conclusion as to the insurability of an applicant, although agents will sometimes try to make the examiner think neither is of much account.

THE TREATMENT OF ALOPECIA.—Saborourand (Bull. de la Soc. française de Derm. et de Syph., 1895, VI, p. 207).—The author, taking the ground that alopecia is a disease of the skin and not of the hair, suggests that the heavy layer of the skin be destroyed by vesiculation, so that the drugs applied may have a more direct action. Saborourand's method is to apply a liquid which will cause a blister, and then on the next day to make an application to the denuded surface of nitrate of silver. The author has found the treatment efficacious and rapid, but as yet insufficient time has elapsed to be able to judge if there will be relapses, as this is another important feature of the disease.—*Medico-Surg. Bulletin.*

THE EXAMPLE OF SANDOW.—It is a question whether the example which Sandow sets to our boys is an altogether desirable one. To be well developed and to become a strong man is certainly a worthy ambition for any boy. But when carried to the extreme of producing such bulky muscles as Sandow exhibits, the example may be most pernicious. Dr. Lydston says, in the *Journal*, that Sandow is confronted by two dangers: first, death at an early period after complete suspension of his athletic strain; and second, death at middle age or soon thereafter, from a continuance of his work. So soon as he rests from his muscular exertions he will not be able to bring about a corresponding involution of his heart and lungs. Disuse means decay and these over-developed organs will be very likely to undergo a rapid degeneration. "Sandow is a wonderful man, but his example is pernicious. His system of muscle building is complete, but its application may be dangerous."—*Food*.

INFANTILE DIETETICS.—We all know that dried nuts, chestnuts, shellbarks, peanuts, etc., given to young children, have repeatedly given us grave cases of convulsions, sometimes resulting in death; and when we see mothers in cars crushing peanut shells and feeding the beans to babies not two years old, we should call a halt—tell her of the danger. Rich pastry or cakes are not much better; they destroy appetite, disorder digestion, fill their little stomachs with flatus, and colic is the result. Cucumbers, pickles, cheese, radishes are other indigestible abominations and should be discarded from the dietetics of children.—*Summary*.

DANGER OF CASTRATION FOR HYPERTROPHY OF PROSTATE.—Sooner or later some surgeon will get himself into serious trouble, says Dr. Frank Lydston in the *Chicago Medical Record*, August, 1895, through having castrated a man for enlargement of the prostate. The patient who, in the presence of keen suffering is likely to disregard the loss of his testicles, is also quite likely to experience a sufficient amount of regret after his sufferings have been relieved, to consider the question of *malpractice*, and when the existence of other and more logical operations for the relief of the symptoms incidental to hypertrophy of the prostate are taken into consideration, the sympathy of the average jury is liable to result disastrously to the surgeon. It must be admitted that the operation of castration for hypertrophy of the prostate is still in its experimental stage, and I venture the opinion that what the procedure most needs is to be saved from its friends. Surgical "itch" and cupidity are likely to seriously cripple the future of an operation which certainly has a certain degree of promise.—*Climatologist*.

DANGER OF THE TRENDELENBURG POSTURE.—The tendency of the day is to adopt the Trendelenburg posture in all operations upon the pelvis and abdomen. But the surgeon should not do this unless there is urgent need for the position. First, because it greatly increases the danger from the anesthetic, and prevents

one of the principal methods of resuscitation from deep chloroform narcosis, viz.: lowering the head. Second, because there is considerable danger of secondary hemorrhage. The elevation of the hips forces the blood from the pelvis, and oozing from torn vessels does not occur until after the patient is in the horizontal posture—perhaps after closure of the incision. A number of such accidents have lately been reported.—*Louisville Med. Monthly*.

TARTARIC ACID TO REMOVE BLOOD-STAINS.—A. Benchiser (Sem. med., 1895, XV, p. cxxxviii). Blood-stains, which are so often very difficultly removed from the hands of surgeons, especially around the finger nails, as well as from surgical instruments, sponges, etc., may be made to disappear readily, according to the author, by the use of tartaric acid. For this purpose a teaspoonful of the acid is dissolved in a basinful of tepid water. In this solution the hands or instruments are washed, and afterward thoroughly rinsed in clean water. If the articles to be washed are of a porous nature or made of cloth, they should be well expressed before being rinsed. Blood pigments are readily dissolved by a solution of tartaric acid, imparting to this latter a characteristic brownish color.—*Medico-Surg. Bulletin*.

INFLUENZA.—Dr. M. A. Richardson, in *The Med. Jour.*, says: When the lungs are attacked, or the bronchi threatening a capillary bronchitis, I am especially desirous to call attention to an old remedy, and one that is of inestimable value in all the complications, arising in the respiratory organs, of an inflammatory nature in influenza; especially so in pneumonia. It is cheap and, above all, absolutely unattended with danger, I do not care how administered. This remedy is none other than lobelia. It should be used by making an infusion; one teaspoonful steeped in a cup of warm water (not hot) and strained off, and one teaspoonful of this infusion given every five minutes until complete relaxation occurs, even if the patient appears so relaxed as not to be able to speak or move the eyes. Then give some stimulant, such as ginger, pepper, whisky, or any stimulant that may be at hand, and your patient will soon vomit an immense amount of thick tenacious mucous; and depend upon it, you need not give yourself any uneasiness about him. After this you need not give another dose of medicine and your patient will get well. I am aware that many physicians are averse to this procedure; I am also aware that but few physicians ever have had experience with this truly wonderful remedy in pneumonia; I am aware, too, that many persons, as well as physicians, are prejudiced and do not have the least conception of the specific therapeutic quality of this remedy. I desire to assure timid people, that this remedy is an absolute specific for pneumonia when administered as above directed, and that you can not kill your patient with it, even if you cause the alarm. This is the point. Do not be afraid, do not hesitate, but give the infusion until complete relaxation has occurred; then stimulate and you have accomplished your desire; or in other words, you have cured your case of pneumonia; after which nothing but rest and nutrition will be required. This practice may be new to many physicians, but it is an old remedy in a new role.—*Med. Brief*.

A TEST OF PHARMACAL "ETHICS."—Mr. E. A. Schubert, of Fostoria, Ohio, in the course of a paper on pharmacal ethics, relates this account of a practical test of the professional integrity and competency of retail druggists in a given section of his State—a section, by the way, probably the equal in professional intelligence and honesty of the average community in Ohio and other States. "I espoused the thought," remarks Mr. Schubert, "that it would be a capital idea to write a prescription of easy composition and analysis, to see how many druggists would fill it correctly. I set to work immediately mailing to each of fifty physicians one of the prescriptions, at the same time asking him to write it as a prescription of his own, send some friend with it to his druggist to have it filled, a copy taken and returned to me with the compounded prescription. Out of the fifty requests sent out, I received thirty-seven answers. The prescription called for a three-ounce preparation, but placing them side by side I found twenty-one to be three-ounce preparations, seven were in size four ounces, while the rest ranged in size from five to eight ounces. It was to be an emulsion; nineteen were of that composition, the remainder were far from being true to name. In color, when correctly filled, it would be nearly white, of these twenty-two were true in color, while the remainder ranged from a steel gray to nearly all the known hues. The principal active ingredient was the acetate of morphine; thirteen only contained this, the remainder principally contained the sulphate. *Out of the entire number returned, eleven were found to be filled correctly.* The remainder were base substitutions, either through ignorance or intention. Of the eleven that were correct, nine came from the hands of Ph. G's, the remaining two were compounded by old and reliable druggists in the city. Of the twenty-six not properly filled we found five Ph. G's., the remainder were country druggists having very little experience in this line and located, with but few exceptions, in towns of 6,000 inhabitants or less." Can it be possible that this sort of recklessness and ignorance characterizes the profession in other intelligent communities?—*Western Druggist*, August, 1895.

NEWS NOTES AND FORMULA.

CRACKED NIPPLES.—Dr. Virginia M. Davis of New York, is accustomed to apply lanolin with the onset of labor four times daily till lactation is established. The nipples are then, after each nursing, annointed with the following :

R. Tinct. Benzoin Comp., 15 drops.
Ol. Olivæ, 2 dr.
Lanolin, 6 dr.

M. Ft. ungt.—*Prescription.*

FOR LOCAL ANESTHESIA.—A mixture of chloroform (ten parts), ether (fifteen parts), and menthol (one part), used as a spray, recommended as an excellent and prompt means for obtaining local anesthesia, lasting for about five minutes.—*Boston Med. and Surg. Journal.*

MOTH PATCHES.— R Ammon. Chloride, 1 dr.
Acid Hydrochloric, 1½ dr.
Glycerin, 7 dr.
Tinct. Benzoin, 2½ dr.
Aq. Rosæ, 3 oz.

M. Shake well, apply night and morning with a brush or feather.—*Med. Summary.*

Epileptics should eat oftener than others to avoid eating too much at a time.

Strychnia and belladonna are particularly useful during the crisis in pneumonia.

Asafetida is recommended in all nervous phenomena incident to pregnancy.

In obstinate uterine inertia, try heroic hypodermics of strychnia and knead the uterus.

HEPATIC AND NEPHRITIC COLIC.—

R. Valerinate of amyl, 3 drops.
Sulphuric ether, 3 drops.

M. For one capsule. Let twenty such capsules be made. Sig. Two capsules every half hour until six have been taken.—*La Medicine Moderne.*

AFTER THE BATH.—According to *Le Mercredi Medical*, Max Edel, a German bacteriologist, took a bath and then examined the water for microbes; he found that it contained 5,850,000,000 ! After a bath of one foot only, he estimated the number of microbes at 180,000,600.

The question now arises : When did Edel have his last previous bath.—*Med. Record*.

FOR SOFT CORNS.—A concentrated solution of tannin, made by dissolving an ounce of perfectly freshly made tannin in six drachms of water with the aid of gentle heat, gives immediate relief to soft corns, if applied once or twice a day between the toes after washing. Tannin in powder is not quite so effectual.—*Cor. Brit. Med. Jour*.

REMEDY FOR INSECT STINGS.—A paint for the stings of insects, in which ammonia is kept in close and prolonged contact with affected part, is prescribed as follows :

R. Aq. ammoniæ, m 150.

Collodion, gr. 50.

Acid salicylici, gr. 5.

A few drops to be applied to each bite or sting.—*Medical Chronicle*.

The number of matriculants thus far for the 1896 session of the Medical Department of the University of Vermont, give promise of a larger class than ever before.

BOOK REVIEWS.

REPRINTS.

State Boards of Medical Examiners vs. Medical Colleges. Reprint from Denver Medical Times of September, 1895, by T. H. Hawkins, A. M., M. D.

Report of the Committee on Car Sanitation at the annual meeting of the Am. Public Health Ass'n, in Denver, Oct. 1-4, 1895, by Granville P. Conn, M. D., chairman of committee.

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Dr. J. R. Flowers, Columbus, Ohio, says: "I am well pleased with Pil Orientalis; many of my patients report satisfactory results."

Dr. C. E. Russell, Alvavado, Texas, says: "The 'Oriental Pill' received from you some time ago has greatly benefited by patient."

LEUCORRHEA.—Dr. Michant, of France, prescribed three teaspoonful doses of Iodia daily for a woman, aged fifty, suffering from chronic leucorrhœa. In three weeks all traces of the discharge had disappeared, which he attributes entirely to the remedy used.

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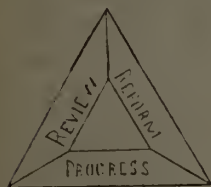
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
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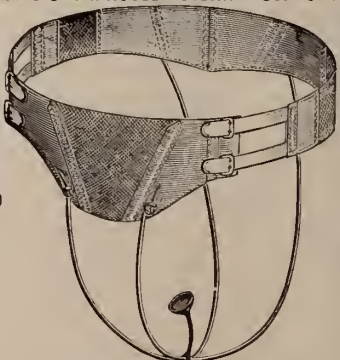
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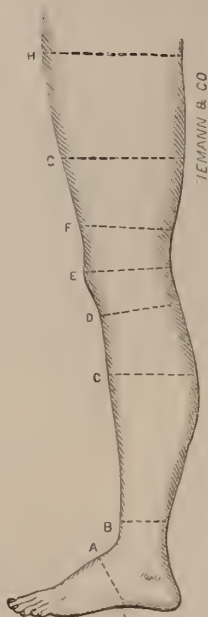
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NOVEMBER, 1895.

(Original Papers)

ADDRESS IN SURGERY.

THE RADICAL CURE OF INGUINAL HERNIA.

By J. B. WHEELER, M. D., Burlington, Vt.

Read at the Eighty-Second Annual Meeting of the Vermont State Medical Society, at Burlington, October 10 and 11, 1895.

Mr. President and Fellows of the Vermont State Medical Society :

Few, if any ailments of a surgical nature are so often brought to the notice of the general practitioner, as hernia, and perhaps there is no other whose palliative treatment, when successful, affords so much relief, and, when unsuccessful, is attended with so much discomfort and risk to life. The perfect comfort which a well-fitting truss affords to a patient with a tractable sort of hernia, is familiar to every doctor, and so, too, is the miserable existence of the unfortunate whose hernia cannot be properly retained by a truss, but destroys its owner's comfort and endanger his life by its frequent descents.

It is with the idea of giving some account of what modern surgery can do for the commonest form of hernia, that I have chosen "The Radical Cure of Inguinal Hernia," as the subject of the address in surgery.

As a rule, a surgical operation is necessary for the cure of hernia, except in young children. In that class of patients, a cure can generally be effected by the use of a well-fitting truss, if persistently worn. Among adults, such a result is occasionally obtained, but too seldom to place any dependence on the truss as a curative agent, especially when we consider that the cases in which a radical cure is most to be desired, are the very ones in which a truss is of the least benefit. Operative surgery, then, must do its best to meet the want, and until operative technique had reached its present state of perfection, the best that surgery could offer was bad enough. The mortality of operations which invaded the peritoneal cavity was so high that a conscientious surgeon could hardly feel justified in advising an operation on a reducible hernia, especially as the cure was far from certain, in those cases which were so lucky as to survive the operation. But since the mortality rate of all abdominal surgery has been so greatly reduced by improved technique, various operations for the radical cure of hernia have been devised, all of which have the low mortality rate, characteristic of modern, as compared with obsolete surgery, and some of which have a percentage of cures which abundantly justifies the operations. It is my purpose to describe briefly those operations which are finding the most favor among surgeons and to state, so far as possible, what may be expected from them in the way of cure.

Radical cure operations may be divided into two classes, those by which the inguinal canal is reconstructed and those by which it is obliterated. The first class is attended with less satisfactory results than the second. Every conceivable method of restoring the shape of the inguinal canal has been tried, but recurrence of the hernia has generally resulted because the surfaces approximated by the sutures were so narrow that the newly united structures were too thin and weak to stand the strain put upon them by the abdominal contents. But when the canal is obliterated by sewing it up tightly, more resistance is offered to the *vis a tergo*, and recurrence is not so common.

The operations most commonly preformed for the radical cure of hernia are MacEwen's, Bassini's and Halsted's. MacEwen's operation consists in isolating the sac and separating it from the inner surface of the internal ring, and then folding it upon itself until a pad is formed which is pressed into the abdominal cavity and stretched against the inner surface of the ring, thus occluding that opening. The canal is restored by

stitching the conjoined tendon to Poupart's ligament, over the spermatic cord. Although the canal is not obliterated in this operation, the results are excellent, especially in the hands of MacEwen himself, but they are attributable to the treatment of the sac rather than of the canal.

The operation which is most frequently performed in this country is the one which bears the name of Bassini, the professor of surgery in the University of Padua. The method which he employs is to isolate the sac, ligate it as high up as possible, after laying the inguinal canal open throughout its length, cut away the sac below the ligature, lift the spermatic cord out of the canal and obliterate the canal by stitching the internal oblique, transversalis and transversalis fascia to Poupart's ligament and the transversalis fascia. The spermatic cord is then laid upon the seam thus formed and covered by stitching the apouenrosis of the external oblique to Poupart's ligament.

Dr. Halsted, of Johns Hopkins University, has devised an operation similar to Bassini's, but differing from it in the following respects. Instead of ligating the sac, he sews it and cuts it away below the seam. He not only lays the canal open, but cuts through the abdominal wall upward and outward from the internal ring, until a point is reached where the muscles are thick enough to afford fairly broad raw surfaces of approximation. He then carries the cord up into this angle of the wound and obliterates the canal by sewing its walls together with stitches which include all the tissues except the skin. This leaves the cord on the outside of the aponeurosis of the external oblique, covered by nothing but skin. With the purpose of diminishing as much as possible the size of the cord and consequently of the hole through which the cord enters the abdomen, Halsted removes all but one or two of the spermatic veins.

The after treatment of these three operations is about the same. The patient is kept in bed, lying down, for three weeks. Some operators let their patients get up at the end of a week, (a plan which has been followed by Bassini himself), but as it is an established fact that healing by first intention is not perfect until three weeks have elapsed, it is safer to keep the patient in bed for that length of time. And I would here take occasion to remark, that if this rule were adhered to in other abdominal operations, we should probably hear less than we do of ventral hernia as a sequel of cœliotomy. No truss is worn after leaving the bed, as its pressure would tend to produce absorption of the

cicatrix and weakening of the abdominal walls under the pad. The patient at first wears a snugly applied spica bandage, which may soon be replaced by a well-fitting abdominal supporter. This should be worn for several months at least.

The so-called "open method" of operating, which was a good deal in vogue about five years ago, has been practically abandoned. The best example of the open methods is found in the operation devised by Professor McBurney, of New York. In this operation, the inguinal canal is laid entirely open, the sac isolated and tied off, and then, instead of sewing up the canal, the edges of the skin are quilted to the deeper tissues and the canal is left to fill up with granulation tissue. The result is that the canal is obliterated by a cicatricial mass. After this operation the patient is kept in bed six weeks instead of three, and no truss is worn on getting up.

Although McBurney's operation is easy to perform and as safe as any other, it has not proved to be as effectual a cure as the other methods which have been described. In many cases the cicatricial tissue with which the canal is filled, gradually yields as time goes on and allows the hernia to descend again. For this reason the operation is seldom done nowadays, even by its distinguished originator.

In operating for radical cure, it is important not only to obliterate the canal, but so far as possible to divert inter-abdominal pressure from the internal ring. A small depression of the peritoneum into that opening is gradually deepened by the pressure of intestine or omentum, forced into this little pocket by the frequent, and sometimes violent contraction of the abdominal muscles. The process goes on in this way until a hernia is fully developed. In order to guard against this danger it is necessary in operating to sew or tie off the sac as high up as possible, so as to render the inner surface of the parietal peritoneum smooth and leave no kind of a depression into which the abdominal contents can be forced. MacEwen's operation, which is by far the most successful of any method in which the canal is not obliterated, has always seemed to me to owe much of its success to the fact that the pad which is made of the sac not only occludes the internal ring, but, by forming a lump behind it, diverts pressure from that spot, instead of inviting it, as would be the case if any depression of the peritoneum were left there. The highest possible ligation of the sac is especially efficacious when operation for radical cure is performed upon a strangulated hernia. The

majority of strangulated herniæ, compared with many of the reducible cases which demand a radical cure, have a narrow canal and a small internal ring, and, if my own experience in operating during strangulation is any criterion, radical cure in these cases does not depend so much on the way the canal is treated as on the height at which the sac is ligated. I have notes of eight cases of strangulated hernia in which a radical cure was attempted either by McBurney's method or simply by high ligature of the sac and suture of the skin wound. All of these cases (except one which was operated on last December) were operated on from two to six years ago, and none of them by the methods most approved at the present day, but none of them have as yet relapsed, though three of the operations were on farmers, one on a teamster and one on a policeman, men who were frequently obliged to make great muscular efforts.

One of the farmers, on whom McBurney's operation was done, was quite an unruly patient and went to work on his farm, long before he ought to have been out of bed. About two months after the operation, he called at my office to say that he considered himself perfectly cured. I upbraided him for getting out of bed in three weeks, instead of staying there for six as I had ordered him to do, according to the directions given by McBurney. This rebuke did not seem to impress him much, so I went on to tell him that he was still in great danger of a relapse, and that he must be careful of himself and not do anything as laborious as ordinary farm work for a year. He laughed and said he guessed farm work wouldn't hurt him much, he had lifted a barrel of apples into a wagon that morning and never stirred the rupture at all. It has never stirred since, though the operation was done four years ago.

I know that eight cases is too small a number to draw conclusions from, but I cannot help thinking that high ligation of the sac has something to do with their successful result, though if there had been large rings and capacious canals, it probably would not have sufficed without more perfect closure of those orifices.

The mortality from any of the modern methods of operating for radical cure of hernia, is almost imperceptible, if the operation is properly done. This statement, of course, does not apply to operations done during strangulation, for there is always a certain number of such cases in which the condition is so desperate that it is impossible to save the patient's life. But in operations on reducible herniæ, done when

patients are in good condition and when there is ample time for all the desirable preliminaries to abdominal operations, there is almost no mortality. MacEwen lost only one case out of ninety-eight, and that from scarlet fever contracted after the operation. Bassini lost a case from pneumonia, fifteen days after operation, and this was his only death in two hundred and fifty-one cases. Lucas-Championniere reports one hundred and eleven, and Kocher one hundred and nineteen cases, with only one death apiece. Halsted reports eighty-two cases with no deaths, and Coley, of New York, one hundred and sixty cases of Bassini's operation with no deaths. Operations for radical cure, then, are attended with the minimum of danger to the patient.

In estimating the success of an operation in curing hernia, it is necessary to take into account the length of time which has elapsed since the operation was performed. How long must we wait after operating before we can be sure that recurrence will not take place? Dr. Coley has investigated this point by examining the records of two hundred and fifty cases of hernia which have been operated on for radical cure by various methods. He finds that while recurrence may take place as as late as twenty years after operation, the great majority (eighty-five per cent) of all recurrences occur within a year after operation, leaving only fifteen per cent for all the subsequent time. From this we are justified in assuming that the chances of recurrence are very small after the first year has passed, but until that time it is not well to speak of a hernia as cured.

As regards the prospect of cure of the hernia, the operations of MacEwen, Bassini and Halsted make the best showing. MacEwen's list of ninety-eight cases, all of which had been under observation from one to ten years, includes only one recurrence. Bassini reports seven recurrences in two hundred and fifty-one cases, but one hundred and eighty of them had been under observation from one to four and a half years without recurrence.

Coley's list of one hundred and sixty cases of Bassini's operation shows no recurrences at all, though about one hundred of them had been under observation over a year. Halsted reports fifty-six operations by his method, with no recurrence, but in many of these cases, less than a year had elapsed between the operation and the report.

In this country, Bassini's operation is at present the favorite one. Excellent as are MacEwen's results, his operation in the hands of

American surgeons has been less successful than in his own, while Bassini's operation seems as satisfactory to most operators as to himself. It is more often done than Halsted's, because it is a less complicated operation, and has been tested for a longer time.

After this consideration of our subject, the practical question arises : " Is it advisable to operate for the radical cure of inguinal hernia, and if so, what class of cases should be operated on and what class should not ? " To the first half of this question, an unhesitating answer in the affirmative can be given. The mortality of the operation is almost nothing, and, as regards the prospect of cure, even if we set aside the results which I have quoted and accept the more conservative estimates of the text-books, which fix the percentage of cures at from fifty to eighty per cent, surely that chance is worth taking when the risk of the operation is so small. It is also to be borne in mind that a hernia which relapses after operation is almost always in better condition and more controllable by a truss than it was before the operation.

In regard to the choice of cases for operation, the patient's physical condition, his age, his mode of life and the size and character of his hernia, must all be considered. Of course no hernia operation, or any other of any importance, should be attempted on a patient who is too feeble to stand an anesthetic. As to the matter of age, before puberty the cure of hernia by the persistent use of a well-fitting truss is the rule, while after puberty it is the rare exception. Operative measures upon children, then, are unnecessary, unless the truss does not control the hernia, or the child cannot or will not wear a truss, or there is no evidence of a cure after a well-fitting truss has been constantly worn for several years.

The patient's occupation and mode of life frequently have an important bearing on the question of operation. Men of sedentary occupation and habits can control their herniæ much more easily than those who do heavy muscular work. A clergyman or bookkeeper might have but little trouble with a hernia which would cause great inconvenience and danger to a laborer. It might, then, be necessary for a laborer to undergo operation for a hernia which a bookkeeper could comfortably and safely manage with a truss. An operation might also be advisable for a man whose truss controlled his hernia perfectly, but who lived where it would be hard for him to get a new truss at short notice, if the one which he was wearing should break.

As to the character of the hernia, one which is small, easily retained and causes its owner no inconvenience, does not require operation except under such circumstances as have just been mentioned. The danger to life from a hernia of this character is very small, as is shown by the willingness of insurance companies to accept such risks. But if a hernia is large, or painful, or irreducible, an operation for its radical cure ought to be performed. Such a proceeding exposes the patient to less danger than does the continuance of the hernia, and offers a good prospect of cure and an almost certain prospect of improvement. Finally, it goes almost without saying that all operations for strangulation should also be operations for radical cure, unless the patient is so reduced as to render the least prolongation of the operation impossible.

CHOLELITHIASIS.

By E. H. MARTIN, M. D., Middlebury, Vt.

Read at the Eighty-Second Annual Meeting of the Vermont State Medical Society, at Burlington, October 10 and 11, 1895.

A woman, forty years of age, previously in good health, famous in her social circle as a cook, and demonstrating in her plump, solid physique her love for the good things of the cuisine, was suddenly and without warning attacked, late one evening, by a most excruciating pain. So intense and prolonged was her suffering that the doctor, hastily summoned from several miles away, found her writhing and tossing upon the bed in what is, without doubt, one of the most extreme forms of agony to which the human frame can by any form of disease be subjected. The pain, markedly paroxysmal in character, was referred to the epigastrium, and the stomach, reflexly irritated by the disturbance of a closely-related viscus, showed its sympathy by first emptying itself of its contents and then by repeated and well-nigh fruitless attempts at vomiting, which resulted only in the ejection of its scanty mucous secretion. The feeble pulse, the anxious countenance, the piteful moans of the unhappy sufferer, the clammy perspiration and the cold extremities served to complete the clinical picture of suffering even to the verge of collapse. Only by the free and oft-repeated hypodermic use of morphine were the severe symptoms alleviated, until, finally, after many days had elapsed, the pain and the nausea quite suddenly disappeared. The epigastric region remained sore, and close examination would have revealed the acme of tenderness in the angle formed by the right border of the right *rectus abdominis* and the costal cartilages. She was finally able to be about the house in a condition of comparative health for about two months, when, as suddenly as before, there was an exacerbation of all the symptoms exactly similar to the original attack; and again with the lapse of time the sufferer's condition became ameliorated as before. Finally, after a second remission of several months'

duration, the original symptoms suddenly for the third time reappeared with appalling severity, and a few days later a new and extremely suggestive feature made itself apparent in a yellow discoloration of skin and conjunctivae, clay-colored stools and bilious urine—the symptom-complex of jaundice—and now percussion demonstrated the liver markedly enlarged. Once more as days passed her condition became alleviated and a very little bile was occasionally visible in the dejecta, although the jaundice persisted and she was still confined to the bed. About four weeks after the occurrence of the jaundice and at a time when her condition had become comparatively comfortable save for the lingering, sub-acute pain and tenderness, she turned over in bed, became unconscious, breathed stertorously a few times and expired.

The necropsy revealed the following conditions: The body, although materially reduced from its former robust and plethoric state, was still well nourished and the abdominal parietes contained adipose tissue two inches in thickness. The liver was uniformly softened and enlarged and extremely adherent by its under surface to the adjacent structures. No traces of the gall bladder or ducts were visible as separate structures—they being obliterated and covered up by the mass of adhesions. Upon carefully separating the adherent organs the common duct was torn across and from its lumen oozed abundant brownish opaque bile, and as it ran out it brought with it several concretions of small size. The gall ducts were uniformly dilated, so that a finger could be readily passed into them. There were eleven stones, faceted and of the usual color. Of these, two or three of the largest were of the size of a Delaware grape, and one of these was found at the duodenal extremity of the common duct, not impacted, but forming a ball valve over the normally-sized and pervious opening into the gut. The other abdominal and thoracic organs were normal, except that the heart and blood-vessels were in a condition of extreme fatty degeneration. A finger could be readily thrust through the cardiac walls. The brain was not examined and the immediate cause of death was not found, but the condition of the blood-vessels and the manner of death unmistakably suggested cerebral hemorrhage.

It must not be supposed that the details of the case just considered have been rehearsed on account of any very remarkable or unusual features which it possessed. On the contrary, the sex, age, physique and habits of the patient, the successive attacks and sudden onset of

pain, its paroxysmal character, even the time of day of its occurrence, the absence of fever, the location of the tenderness, the nausea and vomiting, and, finally, the jaundice and hepatic enlargement form a clinical picture the significance of which could hardly be misinterpreted and which should scarcely require an autopsy for confirmation. As regards the *post mortem* appearances Fenger, at the meeting of the American Medical Association last summer, said in his paper on "Gall Stones in the Common Duct": "In the majority of cases these are floating stones and they sometimes act as a ball valve. In eighty per cent of these cases we find, instead of a dilated bladder, a small atrophied one"—exactly the condition in the case under consideration. The very fact of the absence of unique characters has suggested its introduction, that it may stand as a type of a very common condition, which in its essential features must often occur in the experience of every practitioner. If any further excuse be needed, let it be found in the fact that this very case was variously diagnosed as gastralgia, gastritis, lead colic, peritonitis and cancer, and the real nature of the disease not perceived till within three weeks of death.

Looking at the symptoms pointing so obviously to the condition causing them and keeping in view the findings of the *post mortem*, let us enquire, "What was the sequence of pathological events which led to so unfortunate a termination?" In the absence of positive knowledge of the etiology of gall stones it is only possible to hint at the methods of life and the sedentary habits which may have formed the first step in the process, but, given the concretions already formed in the gall bladder, one of them of small size became engaged in the cystic duct. Immediately the suffering began and the intermittent, peristaltic muscular action of the gall bladder gave to the pain its paroxysmal character. Slowly the calculus passed through the cystic duct until it escaped into the common duct. The latter being of larger size, the stone rapidly traversed its lumen and dropped into the duodenum without having time to cause the symptoms of jaundice—a condition which requires several days for its appearance. Of course the impaction and retention of a concretion in the cystic duct produces no obstruction to the outflow of bile from the liver and hence no icterus. Such was the nature of the first attack, and the second was similar to it. The third and last attack was caused by the larger stone found at the autopsy, which entered a cystic duct quite possibly left more patulous by the passage of the first

calculi. Reaching at length the common duct, and here giving rise to obstructive jaundice, it passed slowly along until it became arrested at the constriction marking the opening into the duodenum, and now, the duct having been fully dilated and no longer tightly grasping the concretion, the pain ceased, but the stone, held against the duodenal opening by the pressure of the retained bile, formed a valve, which, however, was not quite perfect and allowed the occasional passage of the small amounts of bile seen in the dejecta. In the meantime, the other stones having followed in the wake of the leader, the emptied gall bladder became atrophied, and the local peritonitis set up by the great and long-continued irritation glued all the contiguous structures into a mass of adhesions. Finally an acute fatty degeneration of the heart and blood-vessels, which is a not infrequent sequel to such cases, paved the way to the last and fatal event.

And now let us pause to consider what should have been the treatment of this case—what might have been done to bring it to a happier issue. The symptoms of gall stones before one of them has started on its travels are indefinite or *nil*. The unlucky patient, suffering no inconvenience, had no suspicion of her impending fate and consulted no physician, and even a physician would have been without a clue. No method of examination short of actual incision could have detected the disease, except in the rare cases where the thinness of the abdominal walls permits palpation of a gall bladder distended with stones. The Clinical history of cholelithiasis is therefore identical with that of hepatic colic. Treatment, then, has a two-fold object: First, to get rid of stones already formed, and, second, to prevent the formation of more. Many experiments have been tried with a view to discovering some drug capable of dissolving gall stones; and with success so far as the laboratory is concerned, but not so as to the body. Ether, chloroform, turpentine, olive oil and many others have been tried and found wanting. It requires a deal of credulity to imagine that any remedy taken *per os* will pass through the stomach, enter the duodenum and then travel the whole length of the common and cystic ducts in a direction contrary to the current of bile until at length it reaches the gall bladder in a sufficient degree of concentration to dissolve the stones there present. It may be safely said that there is no medicinal treatment for gall stones already formed other than those measures directed to the relief of pain and spasm. To prevent the *formation* of stones in a patient who has

suffered from bilious colic may be quite possible, though appearances are often quite deceptive and conclusions too often prove mistaken. Long intervals may exist between attacks in cases untreated, and spontaneous cures may result, all the stones having been expelled. Again, in cases under really efficient treatment calculi already formed may continue to give rise to attacks of colic and seem to argue the futility of the measures in use. Finally gall bladders distended with concretions are often found *post mortem* in subjects who have never suffered from their presence. In short, the whole subject is beset with difficulties and uncertainties. However, it seems rational to suppose that the salts of sodium, which, as shown in the laboratory, possess the power of preventing the precipitation of cholesterine, may be given in sufficient doses, long continued, to prevent the formation of gall stones and finally cure the disease, and the consensus of opinion favors their use. The phosphate, bicarbonate or sulphate may be given, singly or in combination, in accordance with individual fancy, and many saline spring waters are used with apparently great success. During an attack of colic—while the stone is on its passage through the ducts—the leading indication is by opiates to relieve the pain, favor relaxation and promote expulsion of the calculus. But for those cases in which there is frequent repetition of attacks, or in which there is impaction, surgery offers the best and surest chance of success. The operation suitable will be different according to the circumstances. Removal of the gall bladder, incision of the gall bladder with extraction of the stones and immediate suture, and cholecystenterostomy by means of Murphy's button have all been practiced in many cases with success. Where the concretion is impacted in a duct, the latter may be incised, the stone removed and the opening closed by suture. Or a combination of operations may be necessary. In the case which forms the basis of this article none of these operations could have been practiced on account of the adhesions and other inflammatory changes which had taken place. But even here there might have been a brilliant chance for surgery. It would not have been a very difficult or dangerous matter to incise the duodenum, to dilate the orifice of the common duct, liberate the imprisoned concretions and then close the duodenal incision in the usual manner. Could this have been done sufficiently early—before the extensive degenerative changes took place in other structures—the unhappy subject of this sketch might be living and well to-day.

CASTRATION FOR HYPERTROPHY OF THE PROSTATE GLAND.

Read Before the Rutland County Medical and Surgical Association,
October 15, 1895.

Mr. President and Gentlemen :

Inasmuch as castration for the alleviation of symptoms referable to prostatic hypertrophy is being discussed by the different medical societies of the country and as the subject is one of interest to me, I invite your attention for a few minutes in regard to "Castration for Prostatic Hypertrophy."

The prostate gland is a small body about the size and shape of a horse chestnut lying in the pelvis and surrounding the urethra at its verical extremity. Anatomists have always described it as consisting of three lobes, i. e., two lateral and a median. The two lateral lobes are joined in the median line along their anterior edges by the so-called anterior commissure, which is narrow and contains no glandular tissue. At the posterior extremity the lobes are joined by a similar band that leaves a pyramidal shaped space. Filled with tissue rich in glandular elements, this tissue represents the so-called median lobe. This is subject to pathological changes, but does not in itself contain anatomical features enough to be termed a lobe and should be known as the median portion.

The prostatic body is composed of glandular and muscular tissue. The muscular tissue, according to Kolliker, constitutes the propey stroma, the connective tissue being very scanty. The ducts of the numerous glands open into the urethra along side the vera montanum.

The common ejaculatory ducts pass downward and forward and enter the gland at its base in the median portion.

The arterial supply is gained through the inferior vesical, internal pudic, and middle haemorrhoidal.

The veins form a plexus around the sides and base of the gland and communicate with the dorsal vein of the penis then empties into the internal iliac vein.

Prostatic hypertrophy is a disease of middle life, that is, the symptoms due to a hypertrophy do not generally appear until after the age of fifty, although isolated cases of earlier symptoms have been reported. The causes of the disease is unknown, various theories have been advanced, but as yet no direct cause or causes have been decided upon.

Prostatic hypertrophy consists in an overgrowth of all the normal elements of the gland, muscular, glandular and fibrous, the muscular and fibrous tissue predominates and often times forms distinct globular masses which by their growth distort the shape of the gland and interfere with the normal course and length of the prostatic urethra which in turn interferes with the urethra-vesical outlet setting up the disagreeable vesical symptoms. By the enlargement of the prostate gland the vesical veins which empty into the prostatic plexus become engorged and in conjunction with the residual urine contained in the bladder a subacute cystitis is set up which produces dilatation and hypertrophy of the muscular coat of the bladder, dilatation of the ureters and pelvis of the kidneys, ammoniacal fermentation of the urine favored by but not dependent upon unclean catheters, septic injection and death from uremia.

The symptoms come on insidiously and vary according to the amount of hypertrophy. The old man notices first that he is obliged to get up a little earlier in the morning and pass his water than has been his usual custom, then he finds that he has to get up at night several times, and as time goes on that feeling of satisfaction at the termination of urination is lacking, and in its place the feeling as though there was more to come, and in reality there is. These symptoms gradually increase and nocturition becomes more difficult, the abdominal muscles are brought into play more and urination instead of being an easy function becomes a laborious and unsatisfactory one. At times the patient often complains "that his bowels are off," has indigestion, dryness of the mouth, loss of appetite, nausea and headache, all of these symptoms may be due to slight uremia.

Polyuria is often present and often a report by the patient that he has passed "a lot of water" the diagnosis of diabetes insipidus is made without a further investigation of the case.

The diagnosis of prostatic hypertrophy is not merely made by the subjective symptoms and upon finding an enlargement per rectum one must exclude the possibility of a degeneration of the bladder wall, cancer, verical calculus and tuberculosis.

Degeneration of the bladder wall is generally associated with prostatic enlargement and sometimes independently producing symptoms of cystitis, etc. Cancer can be determined by the nodular feeling of the tumor, emaciation of the patient, inguinal gland infection, haematuria and by microscopic and cystoscopic investigation.

Tuberculosis is recognized by the enlargement and thickening of the epidermis, seminal vesicals, etc.

Prostatic enlargement is sometimes present when it can not be determined by the rectal touch. This is when the enlargement is circumscribed and on the eurethral and cystic surface of the gland, cystoscopic examination will always reveal the true condition of affairs.

Vesical calculus can be readily made out with the aid of a cystoscope and seareter.

The treatment for hypertrophy of the prostate up to within a few years has been entirely palliative and in the minds of some eminent genito urinary surgeons that treatment to-day is still the popular one. There are certain cases of prostatic hypertrophy where palliative measures suffice to alleviate the distressing symptoms and the patient goes on for years, passing his catheter several times a day and having his surgeon pass a steel sound every few weeks, and then there are those cases that will not allow the passage of an instrument, and it is these cases that generally fall into the hands of the genito urinary surgeon.

From an operative standpoint the cases may be divided into, A. Incipient cases in men of advanced age with comparatively healthy bladder and kidneys.

B. Advanced cases in patients who are in rugged health, whose bladder is not seriously involved and in whom the renal function is properly performed.

C. Marked cases in which bladder and kidneys are involved, but, in whom palliative measures suffice.

D. Advanced cases with serious bladder and urinal functions, and in whom paliative measures are of no avail.

Classes A. B. and C. generally do well with palliative treatment.

Class D, however, requires more active measures and it is in these cases that so many various operations have been devised up to within the year 1893, when Prof. John White read his paper before the American Association of Surgeons, the methods most in vogue were drainage at the bladder supra pubecalle in those cases where an attempt at removal of the hypertrophed tissue would be fatal, and in cases where the vitality of the patient was not at a low ebb, the hypertrophed mass was removed supra-pubically and sometimes by the combined method, i. e. supra-pubically and perinlal.

In 1893, Bier of Vienna, published the results he had obtained in a series of cases in which he had ligated the internal iliac artery. Willes Naylor of New York, operated on a number of cases in a like manner, and the results obtained were unsatisfactory.

Prof. John White, before the American Association of Surgeons, in 1893, suggested the possibility of cartration for frootatic hypertrophy, and based his suggestion on a series of experiments he conducted in the University of Pennsylvania, which demonstrated that the prostate in a dog would shrink in size following castration, and this with the knowledge that in animals the prostate was always undersized, gave him the courage of his convictions, and from the number of cases reported his convictions have been confirmed.

Working independently of White, Rahne of Copenhagen, reported two cases in which he performed castration. Ever since Prof. White published his paper in the *Union Medicale*, reaffirming his position, the medical journals having been teeming over with reports of cases, the most of which have been highly gratifying. Unfortunately for me, I have been unable to find a case in which the patient would allow me to remove his testacles, so can give you the history of no personal observations. I know of only one case in Vermont who allowed the operation, and that occurred in the service of Dr. Tinkham at the Mary Fletcher Hospital, Burlington, and I have been informed by the late House Surgeon, Dr. Guy L. Noyes, that the result so far was all that could be desired, marked benefit being noticeable in twenty-four hours after the operation.

The following case, whose history I give, was operated upon by my friend, Dr. J. R. Hayden, and I can vouch for the correctness of the same :

The patient was a man aged seventy years, married, a dentist. He was temperate in his habits and had never had any venereal or genito-urinary disease. Five years before coming under observation he began to suffer from frequent urination at night, and soon afterward during the day. When Dr. Hayden first saw him, his condition was as follows: He had to get up five or six times at night to urinate; during the day he was able to hold his water from thirty to sixty minutes. Considerable vesical and rectal tenesmus accompanied each act. The urine was cloudy and ammoniacal. While straining to urinate the penis became congested and there was a partial erection. At this time the patient was drawing off his urine several times a day and washing his bladder. Of late catheterization had become painful and almost impossible. The capacity of the bladder was six ounces, and there were four ounces of residual urine. A rectal examination showed that the prostate was hard, smooth, and fully twice its normal size. The obstruction to urination seemed to be due particularly to an enlargement of the posterior end of the median lobe.

In December, 1894, double castration was performed. During the first twenty-four hours following the operation there was severe spasm of the compressor muscle, and the patient had to be aspirated several times. On the fifth day a small rubber catheter passed into the bladder; this had not been possible for many months. The urine was clearer and the tenesmus and pain less severe. On the tenth day a No. 18 French catheter passed in quite readily. To the touch the gland seemed softer; it was absolutely painless on pressure. On the twentieth day the patient felt much improved and was able to pass his urine freely without the aid of a catheter. On the thirty-first day twenty-seven ounces of urine were passed per urethra. Two months after the operation the patient stated that he was absolutely free from all pain. His general condition was much improved, and he was gaining in weight. He was able to resume his work. The urinary intervals during the day were from two to three hours; during the night, from three to five hours. Since the operation he has had no erections or sexual desire. He can hold his water for half an hour after the desire to urinate comes on. The length of the urethra decreased three-quarters of an inch since the operation. Thompson's searcher, which it had formerly been impossible to introduce, now enters the bladder with ease. The quantity of residual urine has decreased from four to two

ounces. The capacity of the bladder has materially increased. On April 9th the patient's condition is practically the same as when last reported, although he has more control over his bladder.

The operation of castration in this case was suggested principally on account of the man's sexual symptoms, which were very distressing.

Of course, as with every new operation, only cases with the good results are reported; those cases, however, which have been reported by reliable and painstaking operators give sufficient guarantee of the effectiveness of the operation.

Dr. Bellfield in the Journal of American Medical Association, for March 9th, 1895, and Dr. Bangs in the Medical Record for April 6th, 1895, published under the heading, "Warning Against Castration for Prostate Enlargement," communications, that considering the amount of evidence brought forward by Prof. White and others, make statements that seem hardly justifiable.

Dr. Belfield says that while it is admitted that "castration may cause atrophy of the glands, subsidence of œdema, and relief of distress, but that it will not reduce the hypertrophied connective tissue is *a priori* probable," and Dr. Bangs writes that "a theoretical operation, based upon observations upon dogs and eunuchs, in whom physiological atrophy of the prostate is said to be induced by the abrogation of its sexual function, can not reasonably be applied with the expectation of getting the same results in elderly men in whose prostates hyperplasia has already taken place," and reiterates that the operation is based on theory alone.

Dr. White has in his possession sections of prostates taken from a patient that died after, but not because of the operation, which shows clearly that *it does* reduce the entire gland and that the connective tissue shrinks and dwindles after the earlier disappearance of the glandular elements.

Mr. Joseph Griffiths, F. R. C. S., Hunterian professor of surgery and pathology in the Royal College of Surgeons, England, who has recently reported on the condition of an enlarged prostate eighteen days after double castration. He describes in detail and figures (*British Medical Journal*, March 18, 1895) the changes which had taken place, summing up as follows: "In short, the cell elements first proliferate, and ultimately disappear, leaving a comparatively small amount of fibrous connective tissue in their place. . . . The gland, whether

enlarged or normal, undergoes certain degenerative changes after removal of the testicles which lead to its conversion into a small, tough and fibrous mass in which there are only remains of the glandular tubules and ducts."

Casteration is an operation, although simple in itself, the after effects may not be so as several historical medico-legal cases have shown. Often a man who is living a "catheter life" suffers from a temporary congestion of the prostate gland, which is readily relieved with sedatives, hot sitz baths, etc., and if at this time we take advantage of him and relieve him of what is most near and dear to him, namely, his testicles, and if perchance he should learn through one of your friendly professional brethren that a little opium and hot water would have relieved him of what he had in the bladder without removing what he had in his scrotum a suit of malpractice might follow. Hence in these cases be sure that the obstruction is one due to an excessive hypertrophy and not a congestion of the gland. In conclusion, from the large number of reliable histories published in those cases where the hypertrophy is large and soft, castration seems to be the operation par excellence.

W. W. TOWNSEND, Rutland, Vt.

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EDITORIALS.

A UNIQUE CASE.

There has recently been brought to our attention a somewhat unique case in the history of Vermont medicine. A practitioner in one of our Vermont towns has been accused of infanticide, and put into jail, pending trial, which is to take place in December. During his incarceration he has been *allowed the privilege of still plying his profession*, receiving at the jail sometimes fifteen or twenty patients in one day!!! And furthermore has even been taken out to visit patients living adjacent to the jail!! This can hardly be believed, but it is true, nevertheless. A local reputation for skill in reducing fractures has attracted people to him, and while we do not wish to detract one whit from his fame, nor express an opinion as to his guilt or innocence,

we do not think that this case calls for definite action. Like Cæsar's wife, the members of the medical profession must be "above suspicion," and when there are sufficient grounds to place a physician behind the bars, his license to practice should be revoked and declared void until he proves himself innocent. This is simple justice to those who are pursuing our profession in all honesty and openness, and it is the right of every true physician to claim protection in a case like the above. An occurrence of this nature, unfortunately reflects on the whole profession, and only prompt action can remove such a stigma. *Let the people see in a positive light the true relation of medical men to good citizenship.*

We will gladly impart to any who may desire it, such information as we possess in regard to the case quoted.

HOW WE INTEND TO CHECK SUBSTITUTION OF DRUGS.

Owing to the fact that substitution of drugs is practiced to a great extent, we earnestly request our readers to assist us in reporting to us all cases in which they may have been the victims of this criminal offense, giving the name and address of imposters, also all particulars to substantiate their statement, such as sworn affidavit, etc.

We will expose in our columns the names of fraudulent dealers on receipt of satisfactory evidence.

All our readers will admit, that a doctor who prescribes a certain remedy expects that his prescription shall be filled accordingly. A druggist has no right whatever to use his own judgment in the matter, otherwise he places the reputation of the physician as well as the life of patient in jeopardy.

Feeling that all doctors, honest druggists, and manufacturers of legitimate preparations will be benefited by our action in this matter, we solicit their assistance.

The above notice must be considered as a warning to druggists who believe that they are at liberty to substitute drugs.

The Vice-President's address was inadvertently omitted from the contents of our last issue. The address was entitled, "Chronic Gastritis," and was delivered by Vice-President Dr. F. F. Chaffee, of Hartford.

MEDICAL ABSTRACTS.

THE PROMISCUOUS USE OF POCKET-HANDKERCHIEFS.—At a recent meeting of the Dublin Sanitary Association, the president, Dr. J. W. Moore remarked upon the spread of coryza by the common use of pocket-handkerchiefs. One of the commonest maladies is "cold in the head," or, as it is technically called, "coryza." It is notoriously infectious, and the means of communicating is the discharge from the nostrils. He was satisfied from repeated observations that this troublesome affection often spreads through a family of children and then through an entire household through the promiscuous use of pocket-handkerchiefs. A little child comes to the nurse with the request "Blow my nose." This is carelessly or thoughtlessly done with the parent's or attendant's pocket-handkerchiefs, which thus becomes infected and spreads the attack. In other cases the soiled pocket-handkerchief is allowed to dry without disinfection, and the dry discharge from the diseased mucous membrane of the nose is then diffused through the air, spreading the malady just as measles are spread.

These remarks might be applied to plithisis as well as to coryza.—*Clinical Sketches, London, 1895, ii, 91.*

VENESECTION IN ACUTE NEPHRITIS AND IN PLEURATIC EFFUSION.—Dr. Klug (Sem. med., 1895, XV, p. clxxiv).—The following observations made by the author seem to indicate that phlebotomy may render good services outside of the morbid conditions to which its application is usually limited, and which are, ordinarily, uremia, fibrous pneumonia in young and robust subjects, and the last stages of certain cardiac affections.

The first observation was made in a patient with acute hemorrhagic nephritis, in whom digitalis and warm and dry baths had been employed, against the hematuria and the edema, but without success.

Upon the abstraction of 150 gme. (5 fl. oz.) of blood, the hematuria disappeared rapidly, the albuminuria diminished considerably, and the internal treatment administered simultaneously caused the complete absorption of the edema. The second case was that of a patient, a robust man, with acute pleuritic effusion. The great abundance of the infiltration had brought about distressing dyspnea and cyanosis, which digitalis and ipecac had failed to relieve. However, these remedies, assisted by blood-letting to the extent of 150 gm. (5 fl. oz.), caused the disappearance of the effusion within two weeks, it is reported.

HYDROPHOBIA.—Dr. J. H. Sanborn relates the following case in *Med. World*: A boy, taken sick, was confined in a very hot room from which all liquids were excluded, and was induced to chew and eat lobelia leaves freely between the attacks. He became weak as a child, was unable to stand or sit, sweat profusely,

enormously, drank nothing for two days, at the end of which time the spasms were less frequent and severe, and he was able to eat a little food moistened slightly. He had no attacks after the third day, and was soon around the house perfectly well. During the three days he was kept helpless with the lobelia, using no other medicine.

This was in 1858. I have not seen a case of this disease since, but have desired greatly to have this remedy further tested.

RESORCIN IN CHILBLAINS—Prof. C. Boeck (Med. Week, 1895, III, p. 501).—Prof. Boeck speaks highly of resorcin as an efficacious means of treating chilblains, especially when associated with ichthyol and tannic acid, as follows :

Resorcin, 1 part.
 Ichthyol, 1 part.
 Tannac Acid 1 part.
 Water, 5 parts.

Externally !

The affected parts are painted with this liquid every evening, shaking the bottle well before using. When applied to the skin in this way, it is transformed in a few minutes into a dry layer of varnish. Under the influence of the resorcin, the skin shrivels up, and the chilblains rapidly disappear, it is reported.

The mixture in question, however, in spite of its efficacy, presents certain inconveniences. In the first place, it stains the skin to which it has been applied, and the darkening persists for a week or a fortnight after the treatment has been discontinued ; in the second place, it is sometimes badly borne by patients with delicate skin, it being apt to cause excoriation ; lastly, it is not eligible in cases of broken chilblains.

When the occupation of the patient is such as to absolutely preclude the use of substances which blacken the hands, recourse may be had to the following preparation, less efficacious than the above, but which, nevertheless, gives very good results :

Resorcin, 8 parts.
 Powdered Acazia, 5 parts.
 Water, 15 parts.
 Talcum, 2 parts.

For external use !

A layer of this mixture is applied to the affected parts every evening, shaking the bottle well before using.

Prof. Boeck has found that a prolonged use of this topical application constitutes also an excellent means of treating the peculiar morbid condition of the lips, characterized by continuous dryness and chapping of the mucous membrane.

RHYTHMICAL TRACTION UPON THE TONGUE IN CASES OF APPARENT DEATH.—(La Tribune médicale, 1895, No. 18.)—The proposal of Laborde that respiratory

movements could be induced when they had entirely ceased, by rhythmical traction upon the tongue, has called forth a host of testimonials to the success of the method.

One of the most striking instances is recorded by Callamand. The patient, a healthy young man of 27 years, hanged himself with suicidal intent. It was at least 6 to 7 minutes before he was cut down. The tractions were at once commenced. No pulse, no cardiac pulsation, nor respiration could be detected. Death seemed absolutely certain. Nevertheless, the tractions were continued. In about 20 minutes there was the first sign of inspiration, and soon the pulse became faintly perceptible. It was fully an hour and a quarter before the respiration became regular enough to admit of the cessation of the lingular traction. Consciousness did not return for 20 hours. Recovery was complete.

WARM BATH FOR INSOMNIA.—Eccles (Sanitarian, 1895, XXXV, p. 147)—According to Dr. Eccles the use of the warm bath for the purpose of producing sleep is very efficient if properly carried out. The bath should be administered in a room whose temperature is 65 degrees to 70 degrees F. The patient is made to stand with his head over the edge of the tub, and his head and face are then rapidly douched with water at 100 degrees F. The cooling of the body by the air and the hot sponging of the head send the blood to the head, dilating the vessels of the entire brain. The entire body is then immersed, except, of course, the head, in a bath at 98 degrees F., which is rapidly raised to a temperature of 105 degrees to 110 degrees F. In a few minutes the patient is taken from the bath, wrapped in warm blankets, and, without exertion on his part, taken to his room. The blankets absorb the moisture: in his room the night clothes are put on, a warm bottle placed at his feet, and possibly some warm, liquid food administered. The sedative and refreshing result is often most marked.

TURPENTINE IN POST-PARTUM HEMORRHAGE.—N. Mayne (Toledo Med. and Surg. Rep., 1895, No. 8, p. 548).—Post-partum hemorrhage has been treated successfully a number of times by saturating a piece of lint in turpentine and introducing it by the hand into the uterus. Contraction of the uterus soon took place, and the hemorrhage stopped. The remedy is quick and certain in its action, and easy of application. It produces no injurious result.

CHLOROFORM DURING SLEEP.—The following case is of interest as bearing on the question whether a sleeping person can be chloroformed without awakening:

The reporter was asked to take two teeth out of a girl aged 7, and, going to her home he found her lying on her back in bed sound asleep. Having poured about two drachms, probably more, of chloroform on a folded towel, he gradually brought it to about two or three inches of her mouth and held it there. She went on breathing quite quietly, and neither coughing nor making any unwonted movements. In a very short time she was so well under its influence that her hand fell down when raised, and the conjunctiva was insensible to touch.

She was then lifted out of bed, carried into another room and laid on a sofa, without her giving any sign of consciousness. On opening her mouth, however, she put up her hands and turned her head on the pillow. More chloroform was given, and almost immediately she was in a state of complete anesthesia and the teeth were extracted. She was easily aroused, but almost momentarily fell asleep again and slept for two hours. When she awoke she was much astonished to find that her teeth were out.—*Therapeutic Gazette*.

PRACTICAL DIETETICS.

BY W. GILMAN THOMPSON,

Professor of Materia Medica, Therapeutics, and Clinical Medicine in the University of the City of New York; Visiting Physician to the Presbyterian and Bellevue Hospitals, Etc.

(Pages 142 and 143.)

Diastase is a vegetable ferment which has the property of converting starchy foods into a soluble material called maltose. Like the ferments in the saliva and pancreatic juice, it acts in alkaline solution, but, unlike them, it continues to operate in acid media and, therefore, its action is not disturbed by the gastric juice. Diastase is a peculiar substance which causes the ripening of fruits and vegetables by converting their starches into dextrins and sugars; hence fruit becomes more and more digestible as it ripens.

Maltine is made from three cereals—barley, wheat and oats. *It is rich in diastase*. It may be taken either plain, with cod liver oil, with coca wine, with pancreatin, with hypophosphites, etc., in tuberculosis and other diseases.

NEWS NOTES AND FORMULA.

CREOSOTE IN PHTHISIS.—Ingraham (*Medical Age*, 1995) claims that we have in beechwood creosote a remedy productive of much good, and this drug, properly and systematically administered, is, without doubt, one of the most reliable and standard remedies in the entire pharmacopeia. Failure in its use is due to non-employment of a reliable product, or neglect to prescribe a proper method of administration. A pure beechwood creosote, administered in a proper way, generally gives most successful results.

PRURITUS.—Dr. Waugh, in *Med. World*, recommends :

R. Sodii Salicylat, 1 dr.

Acid Carbolic, 1 dr.

Ung. Hydrarg. Nitrat, 1 oz. M.

If too strong, dilute with petrolatum. Apply night and morning. Give internally salicylate of soda, ten grains; colchicine, one one-hundred-and-thirty-fourth grain, four times a day. Tell patient not to eat too rich food, or drink much coffee or malt liquor, or eat tomatoes.

TO ABORT A COLD.—At the beginning of an ordinary cold relief is frequently obtained by taking

R Sodii salicylat, dr. ij.

Spirit. ammon. aromat, oz. j.

Syrup. aurantii, ad oz. ij.

M. Sig.—One teaspoonful every four hours.—*Practitioner*.

THE AGE TO MARRY.—The men of the country are encouraged to marry too young. It is a known fact that between the ages of sixteen and twenty-five the voluptuous passions dominate. We are at our best, sexually, during this period of life. From twenty-five to forty we are at our best, physically. From forty to sixty we are at the zenith of our intellectual powers. The man who marries before thirty, as a rule, never sees an hour beyond the nuptial couch. The man at fifty, if he be a normal man, will best impress his intellectual characteristic upon his progeny.—*Tex. Sanitarian*.

ACUTE TONSILITIS.—R Crystalized carbolic acid.

Camphor, aa gr. xv.

Dist. aq.

Glycerin, aa oz. ij.

Paint on the tonsils.

INFANTILE INDIGESTION.—After the babe has nursed, give a teaspoonful of a mixture thus composed :

R Pepsin, gr. xv.

Lactic acid, dr. ss:

Syr. of lemon, oz. j.

Aq. dist., oz. iij.

TO REMOVE FISH-BONE FROM THROAT.—Give about four or six ounces of milk to drink. This can be swallowed usually with little difficulty. After about forty minutes give an emetic dose of sulphate of zinc. The milk goes down in a fluid

state, and easily passes the obstruction; by a short stay in the stomach it becomes coagulated into a more or less solid mass, and on coming up forces the bone before it.—*Med. Herald.*

Never use apomorphia which has acquired a greenish tinge. The pure drug is snow white.

Two grains of ipecac mixed with an aloetic dose will prevent its irritant action on the rectum.

Asafetida, in doses of sixteen grains, administered four times a day, is said to be a specific for grippe.

A little sea salt on the tongue, before taking, will mask the disagreeable taste of sodium salicylate.

For chilblains, oil eucalyptus, frequently applied with camel's hair brush, relieves pain, and soon cures.

There is no antagonist to chloroform so valuable as strychnine given in full doses, and on the slightest sign of cardiac or respiratory failure.

Chronic nasal catarrh, when there is a dripping back into the throat, finds a ready cure in hydrastis, triturated with one per cent. sugar of milk, four doses a day.

FOR ACUTE CORYZA.— Carbolio acid, 1 part.
Water of ammonia, 1 part.
Alcohol, 2 parts.
Water, 3 parts.

Drop 10 minims on a piece of blotting paper and inhale the vapor arising therefrom for a few moments every hour.—*Drug Circular.*

FEVER OF TUBERCULOSIS IN CHILDREN.—Dr. Ratchford (Covremennaya Klinika,) in treatment of the fever of tuberculosis, and particularly that of the lungs, in children, advises the following salve :

R Guaiacol.
Lanoline, aa dr. j.
Lard, oz. j.

Rub a little of the salve of the size of a hazel-nut into the region of the chest each evening.

THE ARCHIVES OF PEDIATRICS will commence its 13th year with the January number, under the business management of E. B. Treat, publisher, of New York, long identified with Medical publishing interests. The "Archives" has been for twelve years the only journal in the English language devoted exclusively to "Diseases of Children," and has always maintained a high standard of excellence.

The new management propose several important changes in its make up; increasing the text fifteen per cent. and enlarging its scope in every way. This will give room for the fuller contributions and additional collaborators who have been secured for the various departments, all of which give promise of a more successful era than has been known even in the already brilliant career of the journal.

The editorial management will be in the hands of Floyd M. Crandall, M. D., Adjunct Professor of Pediatrics, New York Polyclinic, and Chairman of Section on Pediatrics, New York Academy of Medicine.

BOOK REVIEWS.

THE POCKET MATERIA MEDICA AND THERAPEUTICS.—A Résumé of the Action and Doses of all Official and Non-Official drugs now in common use. *By C. Henri Leonard, A. M., M. D.*, Professor of the Medical and Surgical Diseases of Women and Clinical Gynaecology in the Detroit College of Medicine; member of the American Medical Association, etc., etc. *Second edition*, revised and enlarged; cloth, large 16 mo., 367 pages, price, post paid \$1.00; Detroit, 1895; The Illustrated Medical Journal Co., Publishers.

The second edition of this popular therapeutic work has had 67 pages added to it, besides typographical errors corrected, etc. A new and complete cross-index has been prepared, which renders the quick finding of a non-familiar drug possible. This is an important feature lacking in many ready-reference books. It is a "down-to-date book," and this with unique arrangement of its description of drugs and compounds secured for the first edition an order by cablegram for 1,000 copies from Baillière, Tindall & Co., one of the largest medical publishing houses in London; a compliment rarely paid any American book. It has also been a popular book with physicians, pharmacists and students on this side of the water, judging from the early exhaustion of the first edition.

The descriptive arrangement of the drugs is as follows: Alphabetically the drug, with its pronunciation, (official or non-official standing indicated), genitive case-ending, common name, dose and metric dose. Then the English, French and German synonyms. If a plant, the part used, habitat, natural order, botanic description, with alkaloids if any; if a mineral, its chemical symbol, atomic weight, looks, taste, how found, its peculiarities. Then the action and uses of the drug or compound, its antagonists, its incompatibles, its synergists and then antidotes. Then follow its official and non-official preparations with their medium

and maximum doses. Altogether it is a handy volume for physician, druggist or student, and will be frequently appealed to if in one's possession. We believe it to be the most complete and exact of any of the books of its class now issued, and its moderate price is to be commended.

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In reporting the case of a woman suffering from Neoplasm in the Stomach, Dr. Ernesto Costa, of Alagna, Italy, says :

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DR. W. W. WOODRING *U. S. Pension Examiner, Mt. Pleasant, Utah, says :* I have been using your Pil Orientalis in my practice now for six months and must say that *they are all that you claim for them, and even more in senile cases of impotency, per ad.* My official position as U. S. Pension examiner gives me many opportunities with the veterans that would never come to light otherwise, and I am prescribing the pills for impotency often, and as an adjunct to other treatment in ovarian congestion. I consider them the most potent aid I have found in thirty years' experience in general practice."

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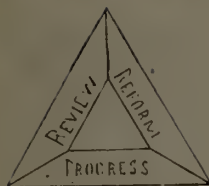
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
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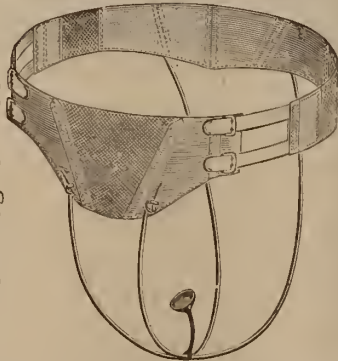
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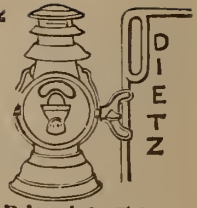
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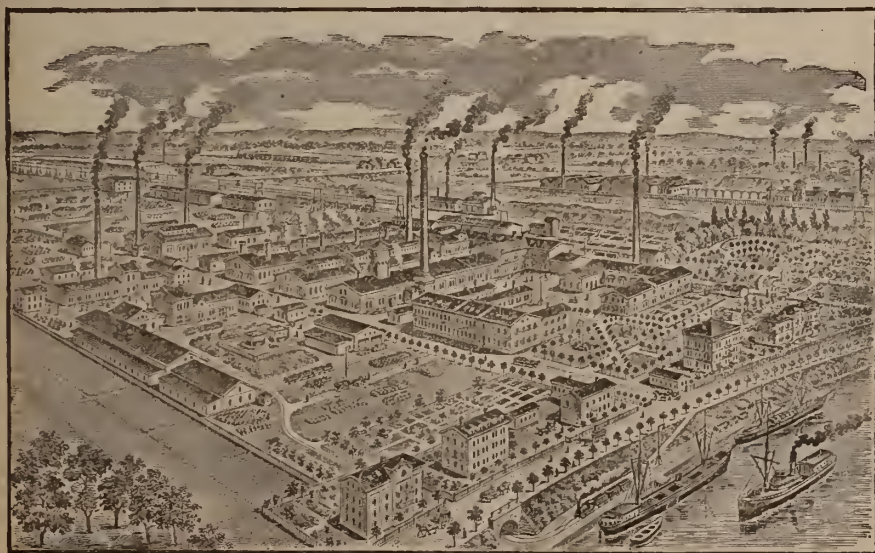
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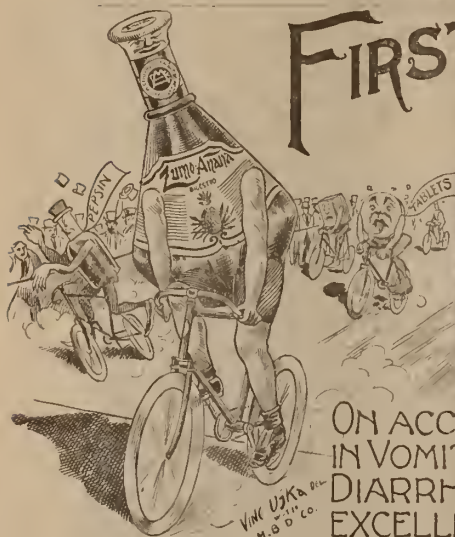
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*A Journal of Review, Reform and Progress in the
Medical Sciences.*

Official organ of the Vermont State Medical Society.

Vol. I.

DECEMBER, 1895.

No. 12

(Original Papers)

ADDRESS IN STATE MEDICINE.*

BY C. S. CAVERLY, M. D., RUTLAND, Chairman Vermont State
Board of Health.

State Medicine may be considered from two points of view. It has a truly scientific aspect to the man of science; the causes and natural history of disease and the influences that may be utilized to combat these causes. To the practical sanitarian on the other hand State Medicine presents a semi-political problem; how shall the results of sanitary research be utilized for the benefit of existing society. While science, patient and painstaking, has evolved an all-important branch of the healing art and established it upon a very substantial theoretical basis, practical art has sought with equal industry the application of our knowledge to our existing social and political conditions. The profound research of modern scientists has made it possible to set up high ideals for the extermination of disease. The practical realization of these ideals has involved us in a crusade of education among the masses and legislative bodies.

The much-used aphorism—"Public Health is Public Wealth"—expresses an axiom, which the combined exertions of our profession and an enlightened public have made the basis of an important branch of all Governments: have given us in a true sense State Medicine.

For many years State Medicine, Sanitary Medicine, Preventive Medicine, was on the defensive. It really had to fight to prove its right to be. The people and the profession were almost equally slow to

* Delivered at the Eighty-second Annual Meeting of the Vermont State Medical Society, at Burlington, October 10 and 11, 1895.

recognize this offspring of modern research. These struggles for existence are happily passed, and Health Departments—State and Municipal—everywhere attest the thorough conversion of public sentiment; while the work that is being accomplished by these departments proves the substantial accuracy of scientific deductions as applied to the prevention of disease.

It is therefore unnecessary in speaking of this latest branch of our art to make any pleas in its defense, to substantiate our arguments with citations from history from Moses down. It is a fact, to speak in modern slang, that Preventive Medicine has come to stay. That our Federal Government is so slow to adopt the suggestions of our representative Medical Societies, for the establishment of a Bureau or Department of Health is of course to be regretted, but the result will surely be attained in time even though we wait impatiently.

While we speak confidently of its firm position in our profession and in our local governments, it is not to be denied that Preventive Medicine has not yet been popularly rated at its true value. The modest, nay niggardly, sums that are generally allowed for this important work do not speak well for the appreciation in which it is held by our legislative financiers. I cannot do better than commend to you—and it would be well if they might reach our lawmakers too—the words of our representative to the American Medical Association, in his recent address before that body, comparing the meagre sums doled out to our Health Boards, with the munificent appropriations to the citizen soldiery. If it were possible to express in figures the comparative value of the work accomplished by these two State beneficiaries to the taxpayers, the argument would be complete. The quiet, unostentatious labors of our health officials do not appeal to the average legislator. That Preventive Medicine will ere long be better appreciated and more generously endowed, is quite certain. This end will be attained by the same persistent effort that has given it a place in the State. The masses will in time insist that they have the full benefits of scientific research at any cost. A medical man in one of our Vermont towns who had some difficulty in controlling an outbreak of diphtheria, wrote me: "The people of this place need a few first-class funerals to make them see the importance of restrictive measures." The grim lessons of disease and death appeal to the dullest intellect. Exemption from disease begets a feeling of security. But when health and life are actually threatened, when trade and commerce suffer, and the cost is measured

by dollars and cents as well as by heart-aches; other arguments are usually unnecessary. When diphtheria or scarlatina invade a school district or a town, when small-pox threatens a State, when the plague seeks entrance by land and sea, the people are fast learning where to turn. Such arguments are slowly effecting what didactic instruction does not, and State Medicine must in time receive financial support more nearly commensurate with the work it accomplishes.

The science of State Medicine as we see it to-day is the growth of a very few years. The discoveries on which it is mainly based are as young as the younger members of our profession. Pasteur, Koch, Ehrlich, Sternberg, and numerous other names rise before us at the mention of modern Preventive Medicine. The discoveries that have successively marked the progress of medicine during the past decade are still fresh in our minds. They occur with ever increasing frequency until it would require volumes to detail the happenings of a single year. The most cursory survey of the field is therefore all that can be attempted in this paper.

Tuberculosis still retains its place as the arch enemy of human life and the most attractive field for the investigator. The exact relation which meat and milk bear to the causation of this disease is being gradually determined. The latest contribution to the study of this subject comes from the royal commission appointed by Parliament five years ago. After the time consumed in reaching its conclusions it is to be presumed that they are reliable and conservative. The report develops nothing new or startling, and its value consists in its corroboration of the findings of independent observers. These points are noteworthy. Dr. Sydney Martin, one of its members, found there was little danger from the use of the muscular tissue of the cow; what danger there was consisted in the chance that the parts used should contain some glandular tissue, or that they should have been cut by a knife used in diseased parts. Their experiments as to the danger from the milk, cream and butter of tuberculous cows developed the fact that they contained no bacilli unless the cow had disease of the udder. The milk from cows with diseased udders was extremely virulent. Their conclusion that no tuberculous cow should be allowed in a herd used for dairy purposes rests upon the fact that the disease is apt to attack the udder very suddenly, not that those in which the udder is sound are necessarily dangerous. Diseased meat is rendered innocuous by cooking on its superficial parts, but not always in its center. Boiling was most apt to

destroy the bacilli, roasting was less apt to. The practical determination of such questions as these is extremely important, and the report of this commission, as will be observed, is very conservative.

The tuberculin test for bovine disease seems to be very generally accredited. Thus far it has proven the most reliable guide to a diagnosis. Out of a herd of fifty cows to which I was permitted to see it applied by Dr. F. A. Rich of Burlington, twenty-four were found by the test to be diseased. The post mortem examinations verified the diagnosis in each case. One scrawny, sickly cow in the same herd, that was considered as surely tuberculous by the owners, but which did not respond to the test, was found post mortem to be non-tuberculous, while many to which the test was applied successfully, were apparently in perfect health. The certainty of this test is destined to make it of the greatest value in locating diseased cattle.

Diphtheria has apparently been attacked during the past year with great success. The serum therapy of disease is essentially the product of the germ theory; Behring, Ehrlich, Roux, and Aronson have each had a share in its application to this dread disease. Antitoxin appears to have made for itself an enduring place in the therapeutics of diphtheria. Though reports of its use have not been entirely harmonious, and there are not wanting those, especially in England, who are still unreconciled to its use and who even pronounce it a failure, still I am confident that the consensus of opinion in the profession is now in its favor. But it is not of its therapeutics that I have to do. It has also been employed as a prophylactic. This application of antitoxin has been so far mostly in public institutions. The reports of its use for this purpose are very uniformly in favor of its immunizing effect. The period of immunity afforded by the antitoxin is variously stated as from thirteen to seventeen days as a minimum. It is to be hoped that the cure and prevention of diphtheria by this application of the antitoxin marks a very important epoch in the history of the disease as well as of medicine. It must still be considered as on trial, and sad experience warns us not to be too hasty in our judgment, yet it cannot be denied that the use of this serum so far warrants great hope for its future. In this connection it may be mentioned that a still more recent application of serum therapy is the discovery of Dr. Thomas R. Fraser of Scotland, of an antidote to serpent venom. Antivenine as he terms his serum, is claimed to render animals immune to the most deadly serpent venom. Its application to man is yet to be made.

Typhoid fever is a disease that has a very practical interest for us. Two outbreaks of this disease during the past year, both in the State of Connecticut, furnish one of the most interesting chapters in the voluminous history of this disease. Both of these outbreaks have been most carefully and scientifically studied by the Connecticut State Board of Health, and the results are very instructive. The first of these outbreaks occurred at Wesleyan University at Middletown. It included twenty-three cases of undoubted typhoid disease. These cases were distributed among the students of the college, in the college dormitories, fraternity houses, and village residences. There were no cases among the citizens of the place.

It was found that all those affected had partaken of the initiation banquets of three of the Greek letter fraternities. After excluding in succession the water, ice, milk, ice-cream, meat and vegetables, it was found that the only common article of the various menus that could by any possibility be suspected, was the raw oysters. These had been obtained of the same dealer, who in turn had received them from Fair Haven, Conn. It was further found that the oysters were taken from the deep water of Long Island Sound, and brought to the mouth of a fresh water creek at Fair Haven, to "fatten." Close to these latter beds were the outlets of several private sewers. Three hundred feet away emptied a sewer from a house where there were two cases of fever. These cases were diagnosed just about the time that the oysters were taken out and sent to Middletown. The chain of evidence thus established, together with several confirmatory facts, made a very conclusive case. Confirmatory evidence was abundant. Of the seven fraternities that held banquets at this time, only the members of the three mentioned and their guests suffered from typhoid. Others used oysters but they were either cooked or obtained from other sources. Two Yale students who were of the number attending these banquets, suffered simultaneously from the disease. Twenty-five per cent. of the students attending these banquets were affected. The use of oysters from the same source by students of Amherst College was followed by an outbreak of the disease.

The other outbreak to which I have referred as occurring in Connecticut, was at Stamford, and occurred during the months of April and May. This epidemic involved 386 cases with a mortality of only 5.7 per cent. This outbreak was traced to the milk of certain dealers and thence to the cans of a single dealer. This man it was found was

accustomed to wash his cans in the water from a well, which was unmistakably contaminated with the washings from a privy vault only twenty-five feet distant. It was not known that this privy had received any typhoid excreta, but its situation near a railroad, and with open door, made it easily accessible to a walking case. While the chain of evidence in this epidemic was lacking in completeness at this point, the investigators decided that it was sufficiently conclusive to warrant them in assigning this as the cause. I have referred to these two epidemics somewhat in detail because they are of rare interest and because they have been seemingly so carefully studied. They are each full of significance.

Serum-therapy has been studied in its relation to typhoid fever. Peifer and Brumer, two German investigators, have experimented in this direction with the blood-serum of sheep, and found it possible to immunize guinea-pigs and mice against three times the fatal dose of the poison. These experiments in serum-therapy are full of promise. Every infectious disease is being studied in this direction, and preventive medicine as well as therapeutics is sure to reap the benefits.

The Stamford epidemic, to which allusion has been made, illustrates anew the important bearing which the milk supply has upon the health of a community. That the infectious diseases may be thus disseminated is not new. But the systematic regulation of this industry by municipal governments is not as common as would be expected. Two epidemics of scarlatina in this State two years ago were early traced to the milk supply, and thus early checked. Similar occurrences are being reported with increasing frequency, until the Stamford epidemic seemed to have made a record in criminal negligence in this direction.

The supervision of milk supplies includes much more than a supervision of its source to guard against infectious disease, it also regards its quality as a food. This feature of the milk problem is not of so much importance to us who live in a distinctly rural State, but to crowded urban populations it becomes a very vital question. Still I am convinced that a careful supervision of all common milk supplies even though the distribution be on a small scale is sometime to become an important feature of our Health Department duties. London and New York have taken hold of the problem very energetically and the extent of the evil of adulterated and disease-distributing milk—or as termed by the London Commission, sophisticated milk—is becoming better known. From some of the reports that are published with official approval it

would seem that milk dealers as a class were a very conscienceless lot. But while this psychological element in their make-up seems to be so dwarfed, the skill displayed in evading law and cheating the public marks them as far from fools.

A review of the recent history of State Medicine would lack completeness if mention were not made of the increased exertions which are being made to protect infant life and lower infant mortality in the great cities. The enlightenment of the tenement house dwellers in nursery hygiene and the causes of infant diseases, by Board of Health tracts, the furnishing of pure and sterilized milk free or at a nominal cost to the poor, excursions to country and seaside for the sick poor, public baths, these and similar measures to combat the terrible infant mortality of our large cities are very God-sends, and are worthy a prominent place in the records of modern Preventive Medicine. It is but just to mention in this connection the work of New York City Board of Health, the pioneer in many practical sanitary movements.

The establishment of free baths, laws to regulate the epidemic prevalence of infant ophthalmia, the vigorous watchfulness of food and milk supplies, improvement in school hygiene, these and similar movements are among the most commendable features of recent State Medicine. While State Medicine as a science interests itself largely with disease there are problems in connection with their causes and development that should be mentioned in a review of its progress and present status. The disposal of sewerage, human excreta, and town garbage, and the relation that the disposal of these waste products bears to a pure water-supply, have become very embarrassing questions to the practical sanitarian. Sewerage systems and sewers without systems are everywhere even in isolated country hamlets considered necessary accessories of existence. The systematic disposal of town garbage has not received scientific attention outside the large cities. While sanitary engineers and experts discuss the advantages and disadvantages of sewage-farms, crematories and reduction processes for garbage, electrolysis and electrized sea-water for sewage, every town and village in the land solves each its own individual problem by emptying its waste into the nearest body of water. The great seaport cities utilize the ocean, the lake cities the lakes, and every inland town the nearest river or creek. This goes on until the Mississippi, the Ohio, the Hudson, the Merrimac, and our own Otter Creek and Winooski, yea even our small mountain streams are veritable open sewers and sources of pure domestic water supplies

are exceedingly scarce. To such an extent has this fashion prevailed that we are involved in a seemingly hopeless attempt if we seek to prevent river-pollution. The protection of our great inter-state water-ways has been the subject of memorials to Congress. It has engaged the serious attention of State Boards of Health. But the practical accomplishment of the end has nowhere been attained, nor a feasible remedy been suggested. The only solution of this vexed question seems now to lie in the purification for domestic use of the polluted water, its protection being rarely attempted.

The attempt is being made to supply pure water to cities dependent on these sewage-contaminated streams, of which Hamburg and London furnish two notable examples. Here filtration of river water through artificial filter-beds has met with apparent success. This is especially true of the city of Hamburg, where the filtration of the water of the Elbe as suggested by Koch, has apparently relieved the city of all anxiety on account of a threatened recurrence of cholera. In this country experiments of the same kind have been tried, notably at Lawrence, Mass. To procure pure and abundant water-supplies, free from any suspicion of disease germs, is now a vital question with many flourishing communities. This State with its myriad brooks and springs is by no means free from perplexities of the sort mentioned. Pure water-supplies are not as plenty as formerly. More populous villages are every year polluting the neighboring streams with their sewerage, and some are unquestionably now using diluted sewage from such streams. The questions that are being asked and answered elsewhere have a very practical interest for us, and that interest must every year increase.

There was recently held in New York city an important meeting of representative bacteriologists from all parts of America, called by the committee on water-supply of the American Public Health Association. This gathering was called as stated in the invitations, "to establish some common ground-plan for systematic work in bacteriology in general and in the bacteriology of water supplies in particular." It is to be hoped that the results of this gathering will mark the beginning of a new era in exact knowledge of pathogenic bacteria, especially as related to water-supplies.

The recent death of M. Louis Pasteur, the most conspicuous figure in the world of medical science, calls for passing notice. Pasteur's scientific career began as a chemist; later he became a professor of physics and of geology; fermentation engaged his attention, and finally

bacteriology. It is in the role of bacteriologist that his name became a household word, and on his discoveries in this field will his fame in our profession chiefly rest. His early work was full of discouragements and in the face of severe criticism. He rescued the chief industry of his country from ruin by teaching silk-growers how to eliminate diseased worms. He discovered the anthrax bacillus, and in late years his name has been universally associated with the protective inoculations against rabies. He is very properly termed the father of bacteriology. Unlike many pioneers in science, Pasteur lived to see his theories generally accepted; he lived to receive unstinted credit from former critics, and the homage of a grateful world.

He belonged peculiarly to our profession, and to him it is probably under deeper obligation than to any other man. His untiring labors have done more than those of any other to popularize Preventive Medicine as well as to give it a place among the sciences. It is fitting then that we in common with the whole world pay reverent tribute to the memory of this modest Frenchman.

These are some of the prominent features of the recent history of State Medicine. Volumes might be written of the happenings in this department of one short year. Scientific research with ever increasing accuracy is fast formulating rules; the practical sanitarian with equal vigor seeks their application. Here we have the student with laboratory equipment and logical mind; there the sanitarian who must understand the latest results of laboratory work and keep in touch with existing social conditions. The study of disease and disease-producing conditions and the application of the results to modern life are, as I stated at the start, the component factors in State Medicine.

The safeguards that science suggests and the State applies to human life are daily becoming more complex as its enemies and their methods of approach are better known. The remarkable developments of recent years augurs well for the future. Medicine and surgery are sciences of prevention as well as of cure. Popular enthusiasm grows apace. The doctor's field lies not only in controlling disease actually present, but also in educating his clientele in its cause and prevention. Doctor and layman are fast becoming common allies against these insidious foes of the race. The coming year and years to come promise startling results. The full realization of our hopes, the extermination of preventable disease, is perhaps distant. Yet pessimism is not a dominant factor of the time. The highest type of civilization in these closing

years of the nineteenth century is characterized par excellence by an ever increasing faith in scientific medicine, notably scientific Preventive Medicine.

The perfect control of preventable disease—the triumph of State Medicine—of which we already get hints, will be the crowning blessing of the highest civilization of the future.

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CASES OF TUBERCULOSIS TREATED WITH TUBERCULIN
AND ANTIPHTHISIN.*

BY L. M. GREENE, M. D., Bethel, Vt.

I am aware of the fact that tuberculin as a remedial or a curative agent is very unpopular at the present time ; but having treated two cases successfully with it I thought it might be of some interest to the society to get a report of these cases.

The first case is one that was treated by Dr. Charles Denison of Denver, at first and subsequently by myself. Dr. Denison treated the case with tuberculin to begin with for diagnostic purposes only. She had arthritis of the knee joints contracted while nursing a sister three years previously, who died of tubercular disease of the pelvis and spine. During the three years after contracting the disease she had been treated, by various surgical measures in hospital, etc., with no good results, always being obliged to get about in a wheel chair. General reaction followed the injection of the third, sixth, seventh and ninth milligramme doses, also slight local reaction in the left lung where she had, ten or twelve years before, suffered some slight diseases. A diagnosis of tubercular disease of the knee joints was thus established.

No further treatment by tuberculin was made at this time.

Seven months after this diagnosis was made, an attack of grip seemed to concentrate the tubercular disease in the glands of the left side of the neck. Bacilli were found in the discharge from the same. The previous diagnosis being confirmed a continuance of the tuberculin treatment was made from October, 1892, to May, 1893.

The result was excellent, the patient being able to go about without crutches some of the time, but always having to use a cane. The ulceration of the glands of the neck was entirely healed at the end of the treatment, and the general health of the woman good. This is the report of the case as given by Dr. Denison.

In the autumn of 1893 a return of the tubercular disease occurred in the right side of the neck in the region of the submaxillary gland and the angle of the jaw. On February 17, 1894, the diseased mass was removed at the hospital in Burlington. On March 5 following, I first saw the girl, the wound from the operation not having healed, and a new growth of tubercular tissue taking place, with a sinus leading down to the periosteum of the inferior maxilla, and a thinnish purulent dis-

* Read at the 82d Annual Meeting of the Vt. State Medical Society, Oct. 10 and 11.

charge from the same. At this time there was a mass as large as a hen's egg and very hard. She was unable to open her mouth more than to pass the end of the little finger between the teeth, on account of induration and deposit about the articulation of the jaw on the right side. There was much soreness with but little pain in the growth. Temperature 99 2-5, remaining uniformly the same each day until treatment by tuberculin was commenced. Appetite good. I treated this case by alteratives (iodide of potassium and arsenic), tonics like iron, strychnia, etc., internally, and locally by injections of iodoform emulsion and packing the sinus with iodoform gauze until May 15. At this time as the mass on the neck and jaw was increasing and the sinus showing no indication of healing, at the suggestion of Dr. Denison I began the tuberculin treatment, by injecting $1\frac{1}{2}$ mgs. in the interscapular region. I commenced with this comparatively large dose for the reason that she had previously had the treatment and was somewhat immunized, so to speak, and therefore not so susceptible to its influence. An injection was made every other day, increasing at first, the dose $1\frac{1}{2}$ mgs. and then by $1\frac{1}{3}$, 2 and 3 mgs. until about June 28, when the treatment was discontinued. No reaction occurred until the 16 mgs. dose was reached. Temperature on the day following was 100 F. No elevation was recorded again until the dose of 30 mgs. was given, when a similar rise was observed. Another reaction occurred on the day following the dose of 50 mgs. The last dose of 55 mgs. was given on June 28, and produced no reaction. At this time the induration was fast disappearing, improvement having begun after the end of the first week of treatment. The sinus had completely closed, and but a slight superficial ulceration remained, and this healed during the following week. Motion of the maxillary joint returned and within four weeks after the treatment with tuberculin was finished the mouth could be opened to its normal extent. It will be seen that reaction occurred only three times during the treatment, this was shown by a rise of $1\frac{1}{2}$ to 2 degrees of temperature, and a feeling of prostration came on about eight hours after the dose was given. That this was a case of tuberculosis is evident from the fact that bacilli was found in the discharge from the growth on the other side of the neck the year before, though none were found immediately before or during my treatment of the case.

After each injection with the exception of the three which produced

systemic reaction the patient felt better, as she expressed it as though she had taken a mild stimulant.

No physical signs of reaction in the lungs were detected during the treatment. There was, however, a sensation of oppression in respiration lasting two or three hours several times after the dose was given, and always after the dose reached 30 mgs.

This patient is now (September 29) in perfect health one year and three months after treatment. She took cod liver oil, iodide of iron, and arsenic until last May. Has taken no medicine since. When this patient came to me in March she was obliged to use a cane and to walk very slowly and carefully on account of the stiffness, lameness and soreness of the knee joints. At the end of the third week of the tuberculin treatment she left her cane at home and has never had to resume its use. She can walk a mile or two at a time and as fast as any one now. How long the present immunity will continue no one can tell, but it seems plain that by no other treatment could the disease have been arrested as no doubt the bone (inferior maxillary) would soon have been involved, the periosteum already being diseased.

Another case was that of an old lady of seventy-eight years, with tubercular disease of the wrist joints. First called to the case in February, 1895. There was swelling and decided limitation of motion of the right wrist joint, with much pain upon attempted movements of the same. Treated the case four weeks by ordinary means, when an incision was made over the dorsum of the joint, and a discharge of a small quantity of pus followed.

Diseased bone could be felt with a probe deep down in the carpus. Iodoform emulsion was injected daily and the sinus washed out with peroxide of hydrogen. Iodide of Iron and Arsenic internally. This treatment, or something like it, was continued until May 1, when a Boston surgeon saw the case, and concurred in the diagnosis, recommended an operation for the removal of the diseased bone, and establishing drainage through the joint. This was flatly refused by the patient and I decided to make use of tuberculin. The styloid process of the left ulnar was at this time beginning to show signs of the disease.

The treatment was commenced by giving 1-20 mg. into the arm, the same sized dose repeated the third day following, and then increased by 1-20 mg. on each third day, when the fourth dose of 3-20 mg. was given systemic reaction occurred, the temperature going to 101° , in

the afternoon of the day the injection was given, which was at 8 A. M. Normal temperature returned in about fourteen hours. The next dose was only 3-20, the next 4-20 and the next 5-20 mgs., which produced an elevation of temperature to 100°. The treatment was continued six weeks, the last dose given being only 3 mgs. Could increase the dose only very slowly as reaction followed every second increase and a fall to the dose previous to the one causing the last reaction was made each time. The only effect that had been produced upon the local disease, was at the time of discontinuance of treatment, to increase the purulent discharge and also the soreness and lameness of the joint. But within a week after stopping the injections, improvement began and was continuous until the sinus in the right wrist closed and the pain, soreness and swelling was gone. At the present time the joint is perfectly well, so far as any active disease is concerned, no pain, soreness, swelling or lameness being present. Of course there is marked loss of power and voluntary motion is limited in the wrist and hand.

The evidences of disease of the left wrist that had begun to appear when the treatment was commenced, have all disappeared and both hands are well.

This patient has had a lupoid disease of the skin of the face for thirty years, which has markedly improved since the tuberculin treatment was made.

At the present time (October 2), the old lady is quite weak and feeble, and although her life has been prolonged several months by the recovery of the disease of the bones of the hands, she will probably not live many weeks longer as she has an organic disease of the heart, and is and has been very feeble for the past ten years.

ANTIPHTHISIN.

Case L. R. A., male, forty years of age. Commenced treatment April 24, 1895. Condition of the lungs at the time something as follows: Left side, bronchial respiration between fourth rib and clavicle, with slight dullness on percussion and increased vocal fremitus. Right side, upper lobe broncho-vesicular respiration with some coarse rales. Bacilli in sputum in large numbers. Much cough and free expectoration. Never had any hemorrhage, no chills and no fever. Appetite and digestion fairly good, but emaciation progressive. Had pleuritis with effusion in left side sixteen years ago, from which he fully recov-

ered. Has had bronchitis of larger tubes for five years. Gave 1-10 c. c. Kleb's antiphthisin April 24, increasing by 1-10 c. c. each day until 1 c. c. was given on May 3, then increasing by 2-10 each day until 2 c. c. were given. On May 24, a dose of 3 c. c. was given and repeated each day until June 5, when the treatment was discontinued and the patient went to the White Mountain region to work at his trade, that of inside decorator of dwellings.

At this time no appreciable difference in the number of bacilli could be seen, but cough and general health much improved, weight increased and color of skin improved. Physical examination of chest found condition of lungs much the same as when treatment was commenced.

On September 5, he returned for a continuance of treatment according to arrangement when he left in June. Condition of lungs as follows: Right respiratory, sound nearly normal, occasionally a few bronchial rales. No dullness and vocal fremitus normal. Left, sub-crepitant rales between fourth rib and clavicle, with slight dullness on percussion. Temperature normal at all times of the day. Appetite and digestion good, and general health and strength improved. Cough troublesome and expectoration free. Number of bacilli diminished, there being about fifteen to the field, while there were more than could be counted easily when the treatment commenced in April. He is now, October 4, taking 3 c. c. every day and appears to be improving in every way. Whether an arrest of the disease will be brought about in this case is a question. After the present course of 100 c. c. is taken he will go to Florida to spend the winter.

Jessie M. B., female, aged 20 years. Sister died of acute pulmonary tuberculosis last January. Commenced to cough in October, 1894. About January, 1895, the time of the death of the sister, temperature began to rise in the P. M., and registered 103° at night. Upper lobe of right lung infiltrated with tuberculous deposit. Sputum swarming with bacilli. Emaciation rapidly progressive. Commenced antiphthisin treatment in March, and gave it in fast increasing doses, until May 1st. No perceptible effect was made upon the progress of the disease or its symptoms, only a general lowering of temperature after the maximum dose of 3 c. c. was given.

Death occurred on the 18th of May.

The treatment of this case by antiphthisin was not undertaken with any expectation of any benefit accruing from its use, but simply

to satisfy the immediate friends of the patient, some of whom had been told of the remedy as being a specific. Indeed no good could be expected from any method of treatment whatever in an acute case of this kind.

In the fall of 1894, I tried the effect of tuberculin in a case of chronic pulmonary tuberculosis, the disease having begun two years previously. In this case, which was a female 22 years of age, there was a small cavity in the upper right lobe, much cough and expectoration, with an evening temperature only 99° at any time during the six months preceding the trial of the remedy. Sputum swarming with bacilli, too many to the field to be counted. Although the tuberculin, which was that prepared in Prof. Koch's laboratory, was given very cautiously in 1-20 mg. doses, and as cautiously increased by only 1-20 mg. every fourth day, the local reaction in the diseased lung was so great after the dose reached only 1 mg. that the treatment was discontinued.

After stopping the treatment the condition of the lung and patient returned the same as before it was commenced. In June of the present year I tried the effect of Klebs' Antiphthisin upon this case. The condition of the lung and general condition of the patient being much the same as when the tuberculin treatment was given, the fall before. The use of this substance could not be persevered in because of the nausea which followed the injections. No preceptible effect was produced otherwise. Antiphthisin, unlike tuberculin, causes no systemic reaction. It is claimed to be tuberculin with the toxic element left out and only the germicidal properties retained. It was at first prepared from Koch's tuberculin, and called tuberculocidin, but at the present time Prof. Edwin Klebs is preparing it, at the Winyah Sanitarium, Asheville, N. C., from a tuberculin made by himself, by an improved method, as he says, and the resulting product he calls antiphthisin, which is much stronger than the so-called tuberculocidin. Klebs with Doctor Karl von Ruck, director of the sanitarium above referred to, are making extensive use of the article in cases of pulmonary tuberculosis, and report many cures and improvement in nearly all cases in which it is tried. Of course the excellent climate and the institutional care and supervision of the patients that prevails at the Winyah Sanitarium, has much to do with the good results of the specific treatment.

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THE GOLD COMBINATION AS ALTERNATIVES.*

BY THOMAS HUNT STUCKY, M. D., PH. D.,*Professor of Theory and Practice and Clinical Medicine, Hospital College of Medicine, Louisville, Ky.*

At a meeting of the Medico-chirurgical Society, April 15, 1895, I had the pleasure of exhibiting a series of cases which had been taking the preparations of gold and arsenic, known to the profession as arsenauro and mercauro. I was under the impression at the time that the good effect claimed was produced in three ways:

1. By stimulation of the secreting glands of the stomach.
2. By the probable alterative effect upon those secretions.
3. That a local antiseptic influence was exerted.

Having continued my experiments in a vast variety of cases, both acute and chronic, and with varied effects and such unexpected results, I concluded at the first opportunity, if possible, to learn wherein and how these combinations exerted their peculiar and in many respects wonderful influence. This opportunity was afforded during my hospital service, which commenced April 15th last, or about four months ago.

At this time of the year the public wards as a rule are free from acute diseases, and the patients were mostly of phthisis, Bright's disease in its various stages, chronic hepatic troubles, and convalescents. I made it a rule with all these cases to withdraw all medicines except the combinations of gold and arsenic. I have selected from a series of cases some four or five, which, with your permission, will be read:

CASE I.—J. H., white, aged sixty years; family history good; previous to April, 1894, in good health; normal weight, a hundred and forty-five pounds; present, a hundred and four. Although very feeble, has not taken to bed. On physical examination, the infraclavicular region of the right side was seen to be flattened, with diminished resonance and numerous moist râles, considerable cough, and muco-purulent expectoration, which contains the tubercle bacilli; has had loss in weight under continuous treatment during the previous six months; temperature ranging from 99.5° to 102° F.; pulse, 96 to 110 a minute. On April 22, 1895, eight drops of the mercuric bromide of gold and arsenic were given hypodermically every four hours, this treatment being continued for six weeks. No deleterious results were noticed; on the contrary, he is decidedly better; physical condition, color, bodily strength, and appetite improved, being now employed as a waiter. The blood counts made at the beginning and the end of the course illustrated well the improvements which had taken place; they are as follows:

*Read before the Mississippi Valley Medical Association at its twenty-first annual meeting.

April 22d.—Corpuscles, 3,800,000 to the cubic millimetre ; hæmoglobin, fifty-five per cent.

June 19th.—The red corpuscles had increased to 5,378,000 and the hæmoglobin to eighty-two per cent. At this time cough and expectoration have disappeared and the moist râles no longer heard ; temperature normal ; pulse about 90 a minute ; deficiency in resonance and expansion remain ; tubercle bacilli not found.

The two points of interest in this case are : First, the increase in the number of red corpuscles : second, and more important, the increase in quality of the corpuscles as demonstrated in the increase of hæmoglobin. The next case is of considerable interest :

CASE II.—F. P., aged sixty-five years, history of dissipation, admitted November, 1894 ; much jaundiced ; pain in right hypochondriac region ; pain and jaundice gradually disappeared, leaving him much emaciated ; anorexia ; bowels constipated : diagnosis, cirrhosis of liver. Urine shows no marked deviation from health. Blood contains many small and large red cells, the red corpuscles numbering 3,253,000 ; hæmoglobin, fifty-two per cent. Treatment, arsenauro, eight drops every four hours, hypodermically, commencing April 22d.

May 5th.—Patient appears to be stronger, remaining out of the bed and not requiring purgatives as formerly. Examination of the blood at this time shows 4,300,000 red corpuscles to the cubic millimetre ; hæmoglobin, sixty-five per cent.

31st.—While still using the gold combinations there was a diminution in the number to 3,850,000 and in hæmoglobin to sixty per cent.

June 19th.—Patient seems to be in fairly good condition. During the past week he suffered from abdominal pain, diarrhœa following this attack. Treatment continued.

20th.—Examination shows 4,650,000 red corpuscles ; hæmoglobin, seventy-five per cent.

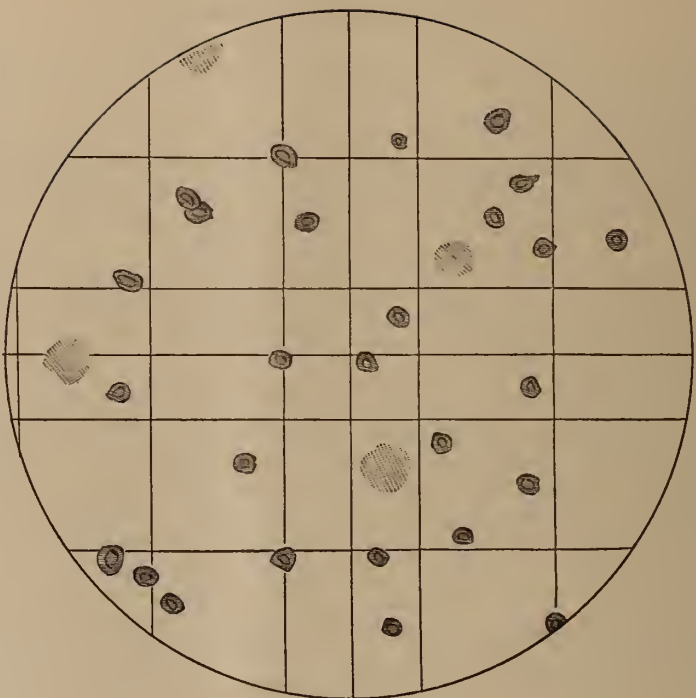
While there have been fluctuations in the condition of the patient, he is after all much better as regards appetite and bodily vigor.

CASE III.—John B., teamster. Notes of this case began in 1893. He then had flattening, especially of the right side, diminished resonance, pain on pressure in supraclavicular region, nocturnal cough, muco-purulent expectoration. The tubercle bacilli could not be found, and many slides examined during the following two years failed to reveal their presence.

Changes in the physical signs have been slow, the area of dullness has extended to the right side, the heart is drawn to the right. The left lung presents the same signs as the right, but not so pronounced ; he has constant fever, the evening rise usually 101° and not uncommonly reaching 103° . The treatment in this case has been varied, including strychnine, cod-liver oil, hypophosphites, and the ferruginous combinations. There had been no improvement in his general condition for three months before the administration of mercauro. He remained in bed, appetite poor, anæmic, bowels constipated.

No examination of the blood had been made prior to April 20th, the day he was placed upon mercauro. At that time the blood corpuscles were 3,400,000, hæmoglobin sixty-five per cent. About ten days after this treatment was insti-

FIG. I CASE III.



CASE OF JOHN B.-CHRONIC PULMONARY TUBERCULOSIS,
SHOWING MARKED DECREASE IN THE RED BLOOD CORPUSCLES.

FIG. II CASE III.



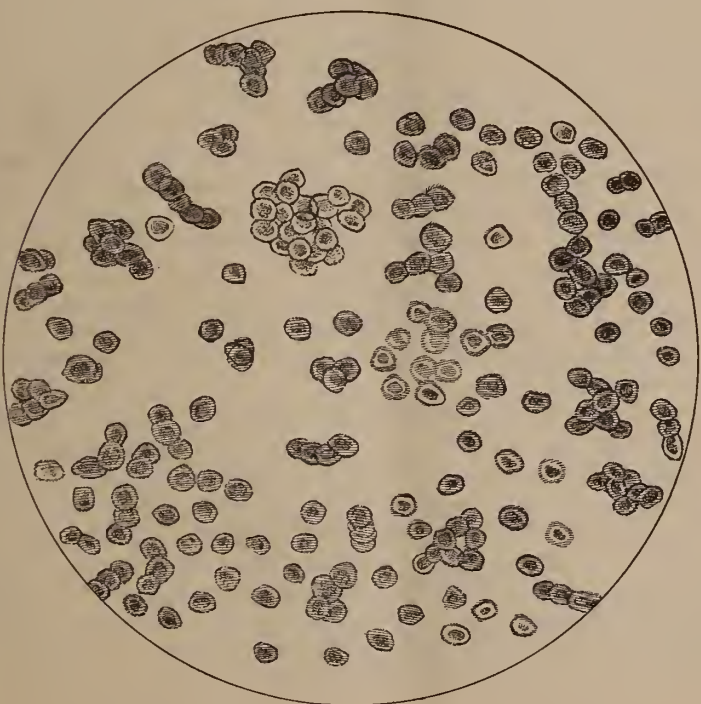
CASE OF JOHN B.-FOUR WEEKS LATER, THE RED
BLOOD CORPUSCLES HAVING INCREASED 1,600,000
TO THE C.C.

FIG. I CASE II.



A. MICROCYTE. - B. MACROCYTE. - C. LEUCOCYTE.
 CASE OF F.P. - CIRRHOSIS OF LIVER WITH JAUNDICE,
 BLOOD CHANGES OF SEVERE SECONDARY ANEMIA.

FIG. II CASE II.



SHOWS INFLUENCE OF ARSENAURO UPON THIS
 CONDITION BY THE GREAT INCREASE IN NUMBER,
 SIZE AND QUALITY OF RED BLOOD CORPUSCLES

tuted there occurred a very remarkable increase in the appetite, with the complete disappearance of constipation. Four weeks later, after having been in the hospital for two years, he was sufficiently recovered to leave. The corpuscular count was normal, hæmoglobin eighty per cent., and he had gained ten pounds in weight.

CASE IV.—John H., aged sixty-five years, habits temperate; this patient was one of the few survivors of the pneumonia epidemic of last winter. He had a mild form of the disease, but it left him extremely feeble. Had been treated with Fowler's and Donovan's solution of arsenic, with the bitter tonics, malt, and stimulants, from March 14th to April 20th. At the end of this time he was scarcely able to sit in an easy chair; could not stand alone, very pale, pulse feeble and intermittent, bowels constipated, complete anorexia. On physical examination there were pronounced dullness, harsh breathing, and moist râles over lower lobe of the right lung, the upper lobe of the left being clear.

April 22d.—Placed upon arsenauro hypodermically every four hours.

May 3d.—The following is taken from bedside notes: "Patient eats a great deal, complexion good, walks about the ward, lung almost clear, no cough, no expectoration."

The rapid improvement continued, and the patient was dismissed May 20th, able to work at his trade. It should be noted that after five weeks' use of solutions of arsenic, bitter tonics, and alcoholic stimulants he had 4,000,000 red corpuscles to the cubic millimetre and hæmoglobin forty-seven per cent. Under the administration of bromide of gold and arsenic the hæmoglobin increased to eighty-five per cent., and the red corpuscles to normal.

CASE V.—Jacob H., aged sixty years. The patient, a Russian Jew, is deaf, and understands very little English. Examined April 21, 1895. Heart sounds normal: urine presents no striking abnormality. Chronic bronchitis; chalky deposits in different joints, particularly carpo-metacarpal, causing the usual grating sound when manipulated; knee and ankle joints painful—so much so that he is unable to walk; no fever; anæmic. The blood count showed 4,000,000 red corpuscles; sixty per cent. hæmoglobin; ten drops of uerecauro ordered hypodermically every four hours.

May 10th.—Lungs clear, cough and expectorations ceased, walks everywhere. Discharged cured of cough and pain May 28th, corpuscular count showing 5,450,000 red corpuscles; hæmoglobin eighty-five per cent., or an increase in one month of twenty-five per cent.

CASE VI.—Came under my treatment January 16, 1895. Mrs. W., aged thirty-seven years, preservation good, temperament nervous, being intelligent and cultured. She has been a morphine habitue for the past six years; this habit was induced by small quantities being given to alleviate pain, which she maintained originated from a lacerated cervix uteri: this laceration has been successfully repaired, but the desire for morphine still existed, and several futile attempts to rid her of the noxious habit had been made. When she applied for treatment her daily amount was about fifteen grains, which was taken by mouth. The method to be pursued in treatment, judging from the condition of the patient, was to decrease the amount taken by the fractional method of giving half the quantity

received the preceding day. To combat the nervous disturbances anticipated by the withdrawal of the morphine, two drachms of the fluid extract of Jamaica dogwood and half an ounce of wine of coca were ordered every four hours. The result of this was not as expected, since on January 19th, she was receiving three grains a day; the nervous disturbances were so great that it seemed unsafe to continue the treatment. Her temperature at this time was 97° F. Pulse rate 110, and respiration, 26, respectively, per minute. Her appetite was much lessened, and was replaced instead by nausea; a serious diarrhoea also existed. The treatment, however, was carefully continued. On January 21st, when only one grain a day was being taken, her chart showed that the loss of appetite, nausea, and diarrhoea had become anorexia, vomiting, and purging, accompanied by continuous muscular vibrations. This resulted in an increase of the morphine to three grains a day, with the dogwood and coca discontinued. At this date liquor auri, arsenii, et hydrargyri bromidi (Barclay), ten drops every four hours, hypodermically, was ordered, with no decrease in the amount of morphine taken.

January 23d.—The alarming symptoms still persist.

24th.—Oscillations throughout muscular system are much less marked, with some intermissions; diarrhoea not so severe.

25th.—Only six stools during the day; vomiting has ceased; some hot milk was retained in the stomach.

26th.—The patient slept well during the night; has had no stools; ate some solid food; trembling almost disappeared; no morphine had been given during the day and no desire for same.

The patient continued under treatment, and improved with careful watching. On February 8th the solution of bromide of gold, arsenic, and mercury was ordered to be decreased one drop a day. She was discharged. April 10th, cured permanently.

CASE VII.—On February 4, 1895, Mr. H. came under my observation during the course of treatment of Case VI. Age, thirty-two years; preservation good; color exceedingly pale. This man presented the same malady as the patient in Case VI, having been a morphine eater during the past four years. Several futile attempts toward a withdrawal of the drug had been made, using various methods of treatment. The method of treatment in this case was materially different from that advocated in Case VI, since his daily amount of morphine, which was twenty grains hypodermically, was diminished less rapidly, and at the same time the diminution was supplemented by increasing doses of nitrate of strychnine, commencing with a thirtieth of a grain increased to a fifteenth, this being given hypodermically. The hypodermic syringe had always previously been used by him, resulting in a mutilated cutaneous surface by needle puncture. In order to preserve this surface as much as possible, the daily amount, twenty grains, was ordered by mouth.

This apparently had no effect in satiating the demand, which required the use of the syringe the following day; his anæmic appearance suggested the examination of his blood, which was made without further delay. The corpuscular enumeration amounted to 4,756,000, which was practically normal; the relative proportion of the white to the red was one to six hundred.

The corpuscular elements were, however, far below normal, since his hæmoglobin was only thirty-seven per cent. of normal. This, we concluded, gave origin to his extreme pallor. The treatment had been in progress only four days when the patient became very much discouraged, at the same time abandoning the attempt. This loss of moral courage was counterbalanced by a complete saturation of the system with morphine. This induced him again to apply for treatment. Instead of continuing the treatment on the same principle as before mentioned, the strychnine solution was abandoned, mercauro, eight drops every two hours, was given during the first two days, with the same quantity every six hours during the following seven days. The morphine was diminished a grain a day. At the end of ten days his condition was very good, having had no marked nervous disturbances, little loss of appetite, and no diarrhæa. The mercauro on February 18th was reduced to six drops every four hours, morphine being discontinued. On March 1st no morphine was being given, all desire for its effects having disappeared; the mercauro was ordered given by mouth. His color was much improved; his appetite for morphine no longer existed; his movements and speech had become composed. He was discharged April 1st, with a satisfactory result. The red corpuscles numbered 4,600,000 to the cubic millimetre.

These two cases are interesting to us from several points of view: 1. They show the comparative values of several methods of treatment used in these afflictions. 2. The impunity with which the economy adapts itself to the drug when given by mouth when it has once been used hypodermically. 3. That these varieties of diseases may be treated successfully with little inconvenience to the patient.

CASE VIII.—Mrs. C. N., aged fifty-six years; occupation, housewife; preservation very good; history of syphilis not given. This case is one whose nature we find widely distributed and concerning whose outcome we are more or less anxious. This condition arises from the multiple lesions from which this condition may originate, and the many possible locations in which such lesions exist.

This old lady, on June 26, 1894, became suddenly unconscious, and the unconsciousness endured for six hours. When consciousness was regained she found there was a partial loss of motion on the right side. The attending physician, after a careful analysis and search of her history, diagnosticated the case as cerebral apoplexy. On July 13th, after acute symptoms had subsided, she was given increasing doses of sulphate of strychnine, with a thirtieth of a grain as a minimum dose; the doses were given three times a day in conjunction with electricity.

This was continued until January 2d, with apparent but not positive results, since only partial sensation, with no motion, had returned. At this time she applied to me for treatment. Her muscles on the affected side were remarkably atrophied, with a tendency to secondary contraction.

At this time she was receiving half a grain of strychnine three times a day; this, with electricity, was discontinued, liquor auri, arsenii et hydrargyri bromidi (Barclay), six drops every four hours hypodermically being used. Passive muscular action daily was advised. A comparison of the right and left muscular systems, respectively, was also at this time ascertained. Around right deltoid

region measured twelve inches; left, thirteen inches; right bicipital region, eleven inches; left, twelve inches and a quarter; right bicipital during flexion, eleven inches and a half; left, fourteen inches and a quarter; right middle third of thigh, twenty inches and a quarter; left, twenty-two inches and a quarter; right calf, twelve inches; left, thirteen inches and a quarter. The treatment suggested was faithfully executed. In a few weeks improvement was noticed, which continued.

On April 22d another examination of her condition was made. At this time she could feel distinctly whatever came in contact with the parts affected. By means of a dragging motion she was able to go from one place in the room to another. Extension of the forearm and the fingers could almost be complete, while the flexor muscles registered to the point twenty on the manometer.

Seeing the past improvement, the gold was still continued, with the expectation of a near approach to recovery.

On May 20th her entire arm could be extended to the plane of the shoulder; extension was very good; the flexor muscles of the hand had recuperated so that they registered thirty points more in strength on the manometer; walking was accomplished readily with the aid of a cane.

We see here a case, apparently hopeless, having reached a point in recovery providing the patient with power to do housewife duties. I selected these few cases out of a large number to demonstrate, in my judgment conclusively, that by the combination of gold and arsenic we have an agent acting as neither of the minerals do when administered separately, or, in other words, we have an entirely new agent in so far as therapeutical action is concerned.

It will be worth our while to look into the chemical differences between the chloride of gold and sodium (salted chloride of gold) and the bromide of gold and arsenic (arsenauro) with reference to its therapeutic action and subsequent elimination.

While not attempting to solve a question which has puzzled experienced men, a few remarks regarding the chemical differences of these agents may furnish a groundwork for an original theory.

1. The chloride of gold and sodium of commerce, so called, is not such in fact, but merely chloride of gold mixed with chloride of sodium; therefore for any chemical purpose chloride of gold only need be considered.

2. Chloride of gold is an extremely unstable compound, its identity being readily destroyed by light or air, while the addition of the least amount of organic matter will almost instantly convert it into albuminate, which upon contact with the mucous membrane or skin surface (the albumin thus formed) is extremely difficult of solution.

3. Gold bromide, even without the addition of the other material, is a more stable salt, is less sensitive to light, etc., and, when in combination with bromide of arsenic in aqueous solution as found in arsenauero and mercauro, this property of stability is increased to a seemingly very great extent.

4. This change in its attitude with reference to outside influences, from a chemical standpoint, may account for its altered therapeutic properties, and this may be said not only as regards the changes due to the combined therapeutic

properties of the combination of gold and arsenic, but with reference solely to the probable modified or intensified quality, which appears to be a changed therapeutic equivalent in the gold itself.

5. As to what I conceive to be the reason of its changed or intensified therapeutic quality of gold in arsenauro, etc. The arsenic bromide added to this solution appears to have rendered the gold more tenacious of its dissolved condition, thus permitting it to be taken unaltered into the circulation.

The finding of gold in the urine after the administration of these solutions would appear to confirm this view.

Taking the formulæ of the two preparations, Fowler's solution would appear to be about thirteen times as strong in arsenic.

One would naturally expect to observe a corresponding therapeutic potency; such, however, is not the case.

Fowler's solution often causes stomach disturbances, and often exhibits suddenly what appear to be cumulative effects.

Such is not true of arsenauro, even though the full therapeutic effect of arsenauro is being obtained.

Fowler's solution is probably decomposed upon entering the stomach into chloride of potassium and arsenious acid; at any rate, after poisoning with Fowler's solution in quantities, arsenious acid has been found in the folds of the mucous membrane, enough having been redissolved or taken up before precipitation to kill. Arsenious acid is with difficulty soluble in the complex organic contents of the stomach.

These difficulties may be due to conditions in the metals themselves; due to the combination or to a possible new salt thus formed. Certainly the gold found in the combination is more stable and tenacious of its dissolved condition, and certainly the arsenic seems to be more readily absorbed, and to exert its therapeutic effect much more constantly and with a much smaller dose, and to be entirely free from that quality common to all other arsenical preparations, stomacheal disturbance. As said before, this may be due to the combination of the two alterative tonics, or to a changed therapeutic equivalent in one or both metals, by their chemical action on each other. My experience up to April 1, 1894, had been in the administration of these products entirely by the month. Numerous writers within the past year reported some very unusual results obtained by their use in indiscriminate cases without any regard to any direct line of therapeutic application, or, in other words, that the therapy of the drug was not known. It seemed to be a sort of stopping-off drug, and when everything else failed a solution of gold was tried.

It was with this idea in view, and the knowledge, or rather lack of knowledge, that led to these experiments. I believe that in the action of the combination of bromide of gold and arsenic we have an entirely different action from any therapeutical agent known; as compared with mercury, iodine, or the combinations of the iodides; the action of gold in the combinations named is greater and intensified; that these combinations enter direct into the circulation as gold and arsenic, and spend their force and exert their influence in an alterative way upon the glandular system; that a marked alterative effect is exerted upon all scleroses

non-malignant ; that it is not only a blood maker, but a blood builder, and a vaso-motor stimulant ; that it not only increases the quantity of corpuscles, but the quality of corpuscles : that under its use hæmoglobin is markedly increased ; that it is eliminated by the kidneys ; that it produces no irritation either when given *per os* or hypodermically.

I desire to return thanks to Dr. J. E. Cashin and Dr. Purifoy at the Louisville City Hospital for very valuable assistance.

MEETING OF THE WHITE MOUNTAIN MEDICAL SOCIETY.

The Seventy-sixth Annual Meeting of the White Mountain Medical Society will occur January 9, 1896, at Wells River, Vt. A very interesting program has been arranged and a large attendance is expected. Dr. A. P. Grinnell, Dean of the U. V. M. Medical Department is to deliver an address on the subject of Diphtheria.

IMPORTANT NOTICE.

This is the last number of '95, and with it many subscriptions expire. If you do not wish to send your dollar just now, kindly communicate the fact to us and we will continue the Monthly as before. See our offer on page 369. With each *cash renewal* or *new subscription* we will send a copy of Dr. King's "Stories of a Country Doctor."

If any physician will send us a new subscriber with the regular price, one dollar, we will continue his own subscription one year gratis. These offers only hold good during December and January.

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EDITORIALS.

Continual use of the telephone by operators and office help is said to be conducive to otitis media. This seems to be a reasonable theory for there is necessarily a strained condition of the auditory organ while using the average telephone receiver. Furthermore, the average person evidently has the opinion that the transmission of sound is directly dependent on lung capacity and so the "fellow on the other end" is greeted with sounds midway between a lion's roar and a storm at sea. From our own experience we are surprised that more tympanums have not been ruptured.

UNIVERSITY OF VERMONT MEDICAL DEPARTMENT.

The forty-third annual course of lectures in the U. V. M. Medical Department will begin Thursday, January 16th, 1896. Principal S. W.

Landon of the Burlington High School will deliver the opening address. There are far more matriculants at this time than in any previous year, and the largest attendance in the history of the Department is assured.

INFLUENCE OF MEDICAL JOURNALISM.

The last decade has witnessed wonderful changes in nearly every line of thought or action. Men nolens volens have been borne along on the tide of progress, and to-day the world and the people therein are better, broader and worth more to themselves and their associates. Looking back over the past and comparing it with the present, one's heart cannot keep from swelling with honest pride, for though the past is replete with successes and triumphs, we are living in a far grander present. Men are receiving the fruition of years of toil, and though pessimism like the serpent of old is still in their midst ready to sow discontent, figures do not lie! The average man is better provided with the necessities of life, and is less a stranger to some of the luxuries.

All classes have been benefited by the world's progress, and the medical profession by no means in the smallest degree. Several factors have produced the present status of medicine, but high in importance above them all stands the medical press. What newspapers have done for the matters of every day life, *medical journalism has done for medicine*. Physicians through recourse to medical journals have enlarged their armamentarium beyond calomel and Dover's Powder, and a healthy stimulation for individual research has produced the triumphs of operative surgery which we are observing every day.

Medical journals have filled up the old ruts and changed the tenor of many a doctor's professional life. Progress has been the slogan of every journal no matter how modest, and aiming under all conditions for something higher and better, their influence has been an uplift for the whole profession. They have pointed out to medical men the necessity for broader views; they have advocated better laws regulating medical practice; they have endeavored to present the truth in regard to medical research; and last but by no means least, they have been a source of encouragement to many a disheartened and discouraged physician. That they have succeeded, requires no argument.

Then, doctor, if you are a true man you will bless the medical journals of this and every land. If you love and respect your profession,

you will welcome the postman who brings to your door the journals for which you subscribe. And it is your duty to subscribe for a number of good medical publications, not only yourself but for the benefit of your patients. Do not satisfy your conscience by claiming that you cannot afford them, for what you cannot afford *is to be without them*.

There is no such thing as standing still in medicine. It is progressive or retrogressive, and you can choose either. Any good medical journal will prove a valuable friend and aid to a higher standard of efficiency.

Greeting for 1896.

The coming year will be a very important one to the VERMONT MEDICAL MONTHLY. Our readers will be supplied with the best that we can obtain in medical literature. We have many articles to appear written by men whose names are an honor to their profession. The papers presented at the 82nd annual meeting of the Vermont State Medical Society will also appear from month to month, and the great value of many of them will render their appearance of double importance to not only Vermont physicians, but to progressive medical men generally.

The MONTHLY will endeavor to give under the head of Medical Abstracts, a monthly epitome of the important articles appearing in the prominent medical journals, and the department, "News Notes and Formula," will present matters of current interest. The Publisher's Department will give important facts concerning our advertisers.

Editorially we shall continue as heretofore, endeavoring to express literal, conscientious views on the important topics of the day.

With this expression of our intentions, we conclude, wishing all our past readers a Merry Christmas and abundant happiness for the New Year.

MEDICAL ABSTRACTS.

TEN RULES GOVERNING THE ADMINISTRATION OF
ETHER.

Dr. W. B. Conway in the *Atlanta Med. and Surg. Journal*, gives the following :

1. Place on a table near at hand a glass of water and one of brandy. A hypodermic syringe charged with nitrate of strychnia 1-60 grain. A small bottle of aromatic spirits of ammonia, a tenaculum and a mouth gag, and one pound of Squibb's ether.

2. The stomach should be empty ; clothes loose and light; a starched napkin, made into a cone, and a pledget of cotton or a handkerchief placed in the cone to receive the ether.

3. Allow no talking in the room. Administer slowly for the first few minutes and then push the ether.

4. Watch carefully the pulse, respiration, and reflex of the eye, and if there are any signs of syncope, lower the head and stimulate the heart's action.

5. If any tendency to strangulation by the tongue falling against the larynx, fasten the tenaculum upon the tongue and pull it forward, allowing the tenaculum to remain on the tongue during the operation.

6. When the patient is thoroughly under the influence of the anesthetic remove the cone, and administer the ether from time to time, as sensibility returns.

7. Remove any kind of mucus about the mouth with the dressing forceps and a pledget of cotton. If any facial cyanosis occurs, remove the cone and induce artificial respiration.

8. If respiration becomes too rapid, stertorous or irregular, or the pulse very rapid and feeble, discontinue the ether at once.

9. If vomiting occurs, turn the patient upon one side so that the ejected matter may pass out without producing strangulation. So soon as the vomiting is over push the ether.

10. If any indication of heart failure, with pallor of the face, or weakening of all the forces, administer, at once, two or three syringefuls of dilute brandy or aromatic spirits of ammonia, alternating with nitrate of strychnia 1-60 grain.

These are simple rules, but important to observe: and the cautious surgeon will not disregard them.

TREATMENT OF CHANCRE.—Von Herff, of Halle, treats soft chancre by disinfecting with a strong solution of bichloride of mercury; he then applies pure carbolic acid. If necessary, cocaine may be first applied to lessen pain. Moist com-

presses of permanganate of potash, sitz baths, and hot permanganate of potash douches are used for four or five days, after which any ulcers that are not already healing may be touched the second time with carbolic acid in the same manner. This method has the advantage that it generally prevents the suppuration of the glandular swellings.—*Modern Medicine*.

BLEEDING HAEMORRHOIDS.—Order complete rest in horizontal position; bathe region with cold boracic lotion. If pain is acute, apply an ointment of vaseline, in each ounce of which are two grains of muriate cocaine, five grains extract belladonna, and seven and a half grains extract krameria. If hemorrhage is severe, apply a solution of iron perchloride on cotton wool. Reduce hemorrhoids with sponge soaked in cold water. In the evening, introduce a suppository containing one-fifth grain of extract belladonna, one-half grain of extract opium, fifteen grains of extract krameria, and sixty grains of cocoa butter. If the hemorrhoids continue to cause annoyance, surgical interference, either by forced dilatation of the sphincter or by extirpation, will be necessary.—*Practitioner*. (London).

CAMPHORATED CHLORAL IN SCORPION AND INSECT BITES.—Vince (Sem. med., 1895, XV, cccxii) —Dr. V., of the East Indies, asserts that of the various local treatments employed in scorpion bites, that consisting of applications of camphorated chloral (equal parts of camphor and chloral hydrate) is by far the best. This mixture gives almost instant relief from the acute pain produced by the venom of the scorpion, it is stated. It only remains to combat the symptoms of collapse which supervene in some cases; and for this purpose milk and brandy are recommended.

The author says that camphorated chloral is equally efficacious in quickly arresting the pain caused by bee and wasp bites. The swelling of the tissues is not influenced by these applications, it is stated.—*Am. Medico-Surg. Bulletin*.

ON MIGRAINE IN YOUNG CHILDREN.—Dr. Collignon, France, has called attention to the occasional occurrence of true migraine in children even at the age of four or five years. He observes that almost invariably it is hereditary, and is characterized by vomiting lasting sometimes a day or two with fetid breath and fever. It begins and ends suddenly, and usually headache is not so marked as in adults. The treatment consists of the administration of warm tea to facilitate vomiting.—*Med. Progress*.

THERAPEUTIC USES OF COAL OIL.—J. H. Powell (Cincin. Med. Jour., 1895, X, p. 740).

The author maintains that coal oil (kerosene) is possessed of valuable therapeutical properties. He has used it both for local applications and internally in a variety of diseases, and found it to give rapid and satisfactory results.

In intercostal neuralgia, painful joints and muscles of typhoid fever, sprains and bruises, small wounds, cuts and local swellings, and in bites of poisonous

insects, the following prescription has given him better satisfaction, he says, than anything he has ever tried :

Coal oil, 2 fl. oz.
Oil turpentine, 2 fl. oz.
Ammonia water, 1 fl. oz.
Tincture opium, 1 fl. oz.

Externally.

In ordinary cases of nasal catarrh and of naso-pharangeal catarrh, the following prescription, sprayed into the nose and throat with an atomizer, has been found by Dr. P. to give quick and certain results, when accompanied by a proper constitutional treatment :

Coal oil, $\frac{1}{2}$ fl. oz.
Oil turpentine, $\frac{1}{2}$ fl. oz.
Water to make 8 fl. oz.

Dr. P. also has great faith in coal oil as a remedy in diphtheria. Some of the worst cases he ever saw were cured, he says, by spraying coal oil and oil of turpentine into the throat with a hand atomizer, and giving small frequent doses of calomel, quinine, and nux vomica.

In follicular tonsillitis coal oil acts like a charm, and chronic ulcers, open sores, and alveolar abscesses improve rapidly from weak local applications, it is stated.

In fermentative dyspepsia, and catarrh of the stomach, the author found that coal oil, administered in 10 to 15-drop doses after meals, gave better results than any other remedy.—*Am. Medico.-Surg. Bulletin.*

THE ANTIDOTE FOR CARBOLIC ACID POISONING.—Dr. E. Carleton (*The New York Medical Times*, November, 1895), reports that, while experimenting with pure carbolie acid, he accidentally spilt about two ounces on his hand. He immediately put his hand under a stream of cold water, but it became white and numb. He thought that there would be no escape from the usual result—desquamation and slow recovery of sense of touch. The odor was persistent and in the belief that it might be changed thereby he applied vinegar, and while bathing the injured part he noticed that its former function and color had returned. In five minutes nothing remained but the modified odor. Clinical verifications have been obtained, and Dr. C. S. Kinney gives evidence to the antidotal action of vinegar when the mucous membrane is affected.

NEWS NOTES AND FORMULA.

HOW TO AVOID COLDS.—There is one simple way of avoiding colds—keep your mouth shut while out of doors. The man or woman who comes out of an over-heated room, especially late at night, and breathes through the mouth, will either catch a bad cold or irritate the lungs sufficiently to cause annoyance and unpleasantness. If people would just keep their mouths shut and breathe through their noses, this difficulty and danger would be avoided. Chills are often the result of people talking freely while out of doors just after leaving a room full of hot air, and theatre-goers who discuss and laugh over the play on their way home are inviting illness. It is, in fact, during youth that the greater number of mankind contract habits or inflammation which make their whole life a tissue of disorders.—*Fam. Doct.*

GONORRHOEA—SECOND STAGE.—An excellent—in fact a beautiful—emulsion for gonorrhœa in the second stage, is the following:

R. Balsam copabia, oz. j.

Milk of magnesia, oz. iij.

Aq. camph., ad oz. viij.

Ft. emulsio. Sig. Teaspoonful four times daily.—*Ex.*

APPLICATION OF LEECHES.—The application of leeches to the temple is often of great service in relieving pain and subduing inflammation in the eyes and their appendages. The leech is best applied by putting it in a large test tube partly filled with water. When this is tilted so that its open end and the mouth of the animal come in contact with the skin of the temple, the leech feels so much at home in his native element that he promptly bites the skin when he touches it and sucks himself full of blood.—*Universal Medical Journal.*

RESTORATION OF JOINT FUNCTIONS AFTER FRACTURE.—Massage, soaking in hot water, frictions with liniments, electricity, passive motion, and attempts at voluntary movement continued for months, will often cause great improvement in the functional usefulness of joints supposed to be irretrievably damaged through fracture.—Roberts, in *Med. Record.*

RHEUMATISM.—In cases of acute rheumatism, Dr. Carpenter very often prescribes of the following combination, a teaspoonful every three hours:

R Sodium Salicylate, 4 dr.

Solution Potassium Citrate, 2½ dr.

Syrup Ginger, ½ fl. oz.

M.—*Phil Polyclinic.*

Nocturnal attacks of asthma may be prevented by giving small hypodermic doses of strychnia and atropia combined.

It is said that one-tenth of a grain of apomorphia, hypodermically, will break up and thereafter prevent an attack of hysteria.

In uterine inertia, a little capsicum in water, repeated as indicated, will strengthen pains and guard against hemorrhage.

In cases of retarded eruption, twenty drop doses of fluid extract jaborandi will bring out the rash, with amelioration of general symptoms.—*Med. Brief.*

TOOTHACHE.— R Acidi Arseniosi, 2 gr.
 Morph. Sulphatis, 1 gr.
 Creasoti, qs.

M. Fiat pasta. Sig.: Apply by a bit of cotton wool to carious portion.—
Prescription.

Cleanliness should be the first consideration in the treatment of gonorrhœa.

For a bad cold, try strychnine arsenite, an one-hundredth grain every two hours.

Early applications of strong solutions of nitrate of silver are recommended for bed sores.

BOOK REVIEWS.

OXYHÆMOGLOBIN AND ALLIED PRODUCTS.

*Published Under the Direction of F. E. Stewart, M. D., Ph. G. Director of
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This little monograph on the coloring material of the blood is really a very instructive production. The subject is new, and scientifically treated by able men, aided by many excellent illustrations. The book, it is claimed, is in no sense intended as an advertisement, but is simply published in the interest of scientific research, and we believe that it will abundantly fulfill its intended mission.

THE INTERNATIONAL MEDICAL ANNUAL.

E. B. Treat, Publisher, New York, has in press for early publication the 1896 *International Medical Annual*, being the fourteenth yearly issue of this eminently useful work. Since the first issue of this one volume of reference work, each year has witnessed marked improvements; and the prospectus of the forthcoming volume gives promise that it will surpass any of its predecessors. It will be the conjoint authorship of forty distinguished specialists, selected from the most eminent physicians and surgeons of America, England and the Continent. It will contain reports of the progress of Medical Science at home and abroad, together with a large number of original articles and reviews on subjects with which the several authors are especially associated. In short, the design of the book is, while not neglecting the specialist, to bring the General Practitioner into direct communication with those who are advancing the Science of Medicine, so he may be furnished with all that is worthy of preservation, as reliable aids in his daily work. Illustrations in black and colors will be consistently used wherever helpful in elucidating the text. Altogether it makes a most useful, if not absolutely indispensable, investment for the Medical Practitioner. The price will remain the same as previous issues, \$2.75.

THE ARCHIVES OF PEDIATRICS, a Medical Journal devoted to the Diseases of Infants and Children, enters upon its 13th year, January, 1896. It is to be enlarged and illustrated. Additional collaborators have been secured giving increased interest and strength to its columns. It will hereafter be under the business management of E. B. Treat, Publisher, New York.

THE TRANSACTIONS OF THE ANTISEPTIC CLUB has reached its third edition, and to make the work still more popular, the price has been reduced from \$1.75 to \$1.

PUBLISHER'S DEPARTMENT.

Tartarolithine, in a case of acute nephritis, under my personal notice, in my own family, has been the most efficient remedy in contrast with the alkaline lithia waters and the salts of lithium that I have ever seen.

L. L. DUNBAR, D.D.S.,

University of Cal., College of Dentistry, San Francisco, Cal.

PERMANENT AND RELIABLE.—A letter from Dr. Policarpo Diaz, of Guanajuato, Mexico, to Scott & Bowne, says that, in 1889, he purchased twenty bottles of Scott's Emulsion. At that time he was "suffering from a terrible attack of tuberculosis." He says he does not now have the slightest symptom of that disease, and is in the best of health. He adds that, at the time of writing, April, 1895, he has one of these twenty bottles on hand; and "although enough time has certainly elapsed for the Emulsion to separate, yet it is in perfect and unchanged condition."

(Continued on Adv. page xi.)

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2. A Course in Theoretical and Applied Chemistry.
3. A Course in Agriculture.
4. A Course in Mechanic Arts.
5. A Course in Electrical Engineering.

Candidates may be admitted without examination if they bring certificates from reputable Preparatory Schools whose courses of study fully meet the requirements for admission, but students so admitted are on probation during the first year.

A Course preparatory to the study of Medicine, embracing from two to three years, is offered, the particulars of which will be furnished on application.

All the courses in the Academic and Scientific Departments are open to young women upon the same conditions as to young men. The young women are required to room and board in private families approved by the Faculty.

Scholarships, cancelling tuition, have been established for the benefit of young men of limited means, in the Academic Department.

The University enjoys unusual facilities for securing employment for students in the Engineering Department, both during the course and after its completion.

M. H. BUCKHAM,

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